

Manufacturers Record

Exponent of America



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OCTOBER 27, 1921

EXORBITANT FREIGHT RATES SHOULD COME DOWN.

The way in which foreign pig iron and coke are capturing the Pacific Coast market is alarming to all well wishers of this country. Mr. James A. Green, President of the Matthew Addy Company, in a letter to the Manufacturers Record says:—

"The Pacific Coast, as far as pig iron, coke and coal are concerned, is no longer tributary to the United States. Our excessive freight charges as against the very low steamer rates from abroad have simply put domestic iron and coke out of competition. Now, our own coke ovens and our own blast furnaces need a market. We need our domestic market and we need ALL of the domestic market."

In a letter to a leading iron concern, a copy of which Mr. Green inclosed, he said:—

"What in the world can we do with the Pacific Coast? Of course we have spent a lot of money developing trade there, but that money is apparently in the nature of a deferred asset.

"Silicon 2.75 (that is No. 1 iron) from Belgium and Germany has been sold at \$24.00 loaded in cars, free of all charges, on the wharf at San Francisco. Our freight rate from Birmingham is \$22.40 plus a war tax of 67c., or \$23.07 for freight alone. Foreign coke of excellent quality (we are told this foreign coke is as good as anything that ever was produced here) is being sold at \$20.00 loaded on the wharf, whereas the cheapest freight rate from the Eastern coke fields is \$15.10 plus a war tax of 45c. Were the coke shipped from the New River fields, and New River coke has always been the favorite on the Coast, the freight alone would come to just about the price of the foreign coke. I need not draw any diagram."

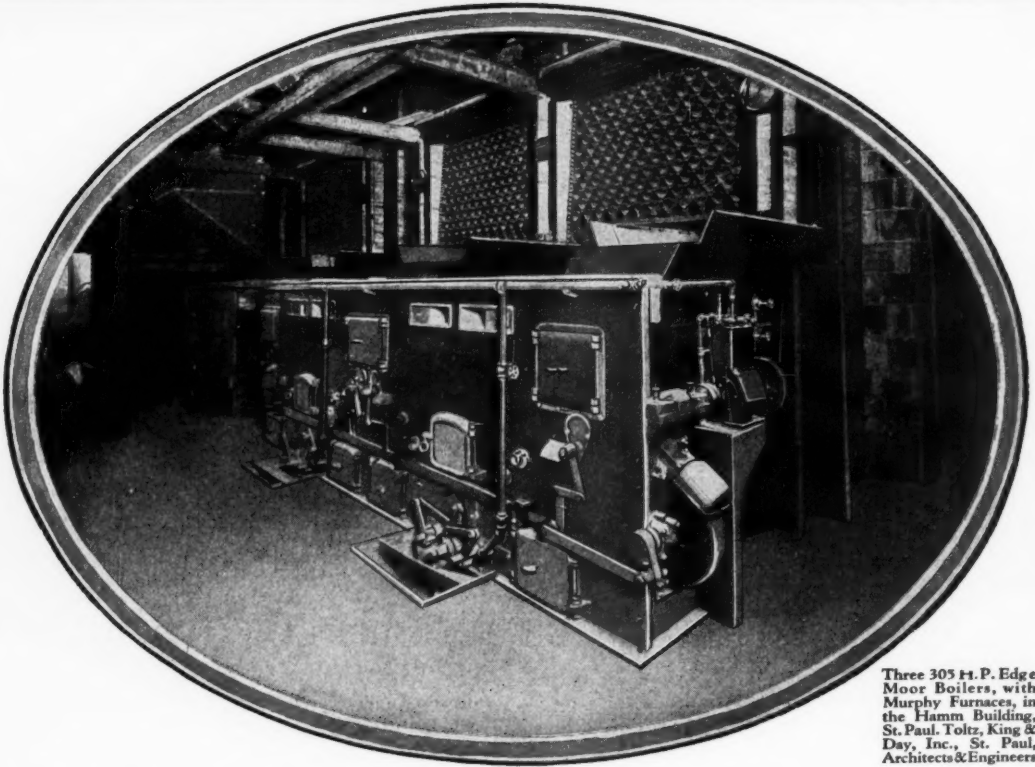
This statement in regard to the prohibitive influence of high freight rates on our domestic trade only serves to illustrate that it is not possible for this country to attain a full measure of prosperity while transportation rates are as exorbitant as they are at present. We are fully aware of the railroad situation and all the handicaps under which railroads are working, but if this Administration would unthrottle the railroads, would repeal the Adamson Bill and the Labor Board, and permit railroads to function once more under private control, it would be possible for them to get back to that managerial ability and initiative which made the railroads of America the wonder of the world in transportation.

We have cursed ourselves with railroad legislation, and we have practically legislated ourselves into poverty. We have permitted vicious legislation, such as the Adamson Bill and the Labor Board, to destroy all power of the railroads to properly function because we cowardly yielded in 1916 to the railroad brotherhood's hold-up of the country.

The situation outlined by Mr. Green is only typical of what is going on in every part of the country, for business is everywhere hampered by high transportation, and by the unpardonable yielding by this Government to the domination and the damnation of the country by radical unionism.

Regardless of temporary loss the railroad managers must do their part and lower rates and trust to the country to safeguard them, for they cannot maintain present rates without halting a business revival and retarding their own progress.

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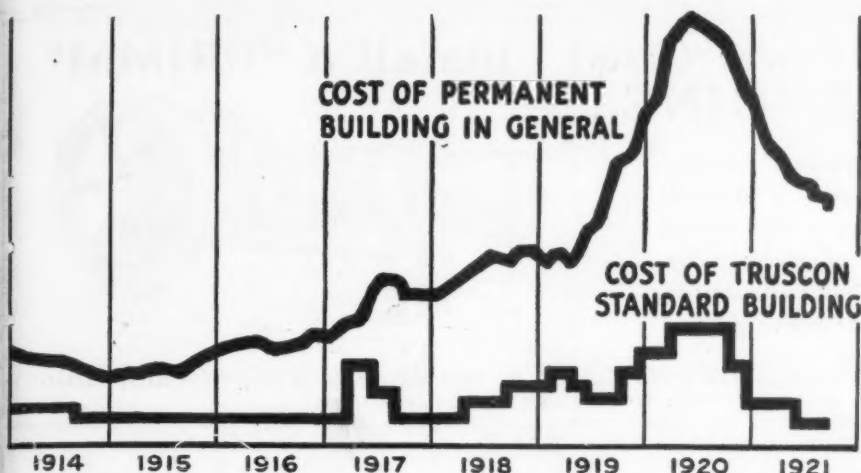
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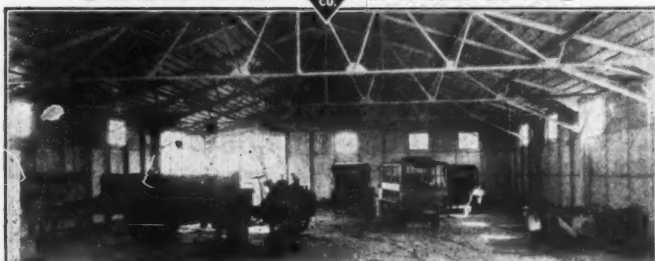
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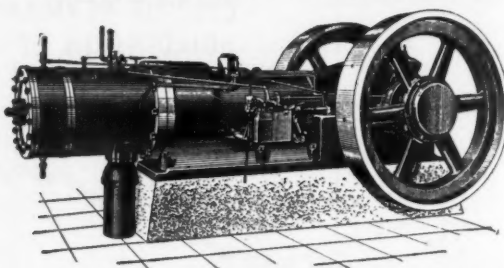
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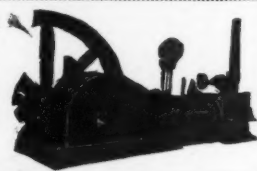
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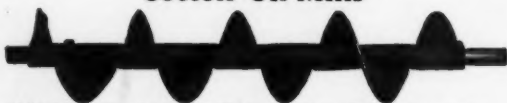
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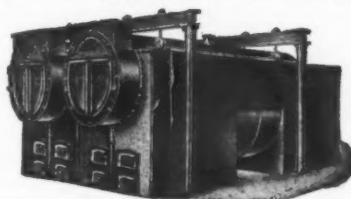
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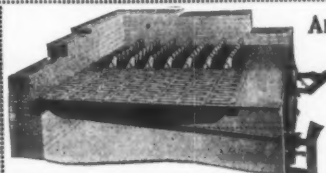
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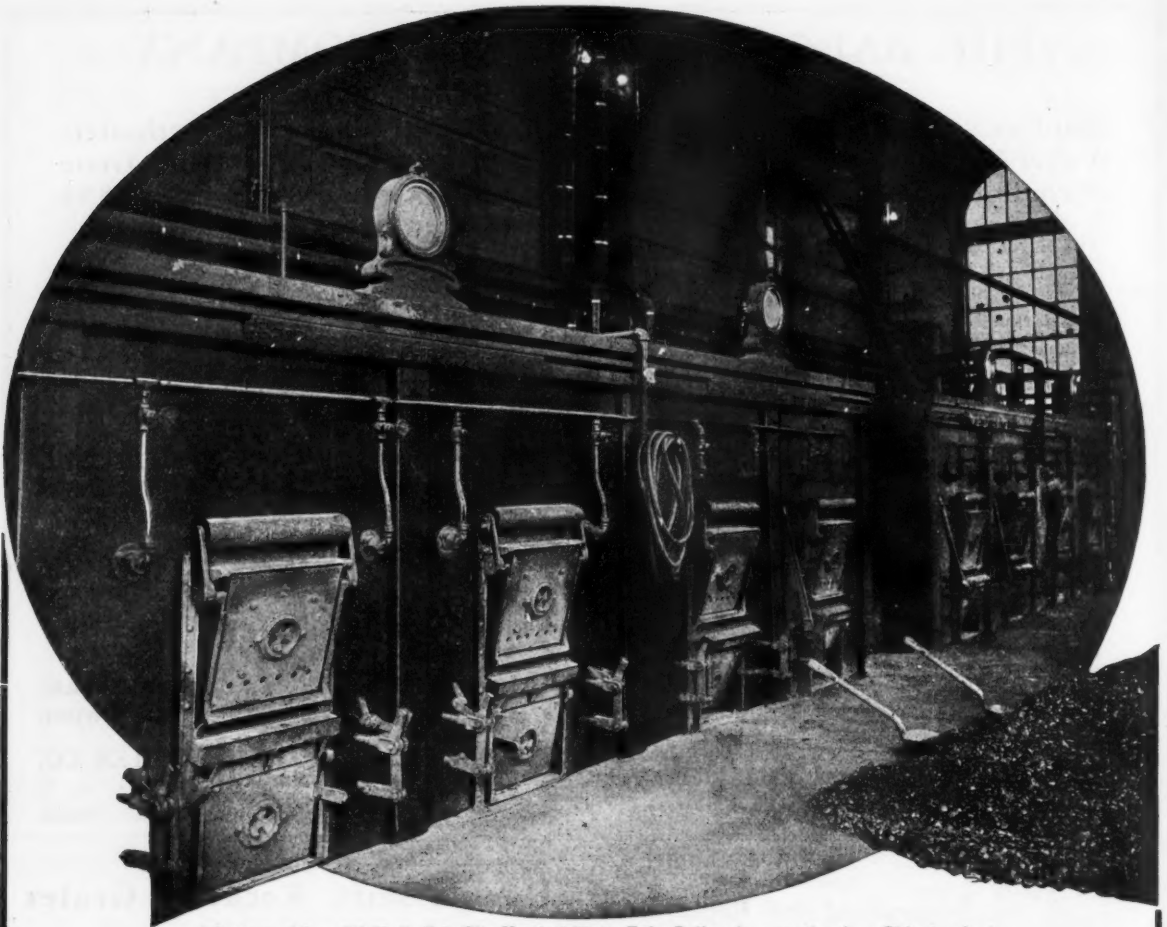
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For another important reason—rapid circulation—scale forms very slowly if at all in

ERIE CITY VERTICAL Water Tube Boilers

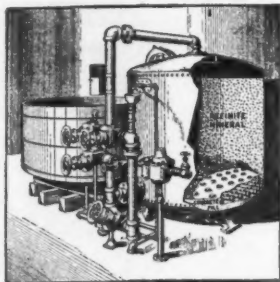
Economy in coal is assured because vertical tubes heat up more readily than horizontal tubes. Each tube is a steam-producing member. More heat is utilized by vertical than by horizontal tubes, for the heat rises and flows up the entire length of vertical tubes.

Erie City Vertical Water Tube Boilers have no hand holes, and are thus free from the troubles they cause.

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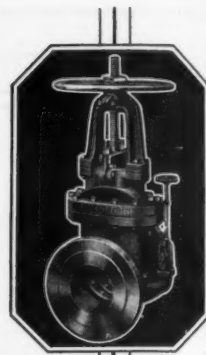
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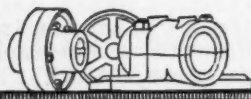
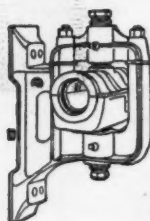
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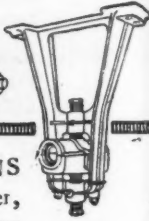
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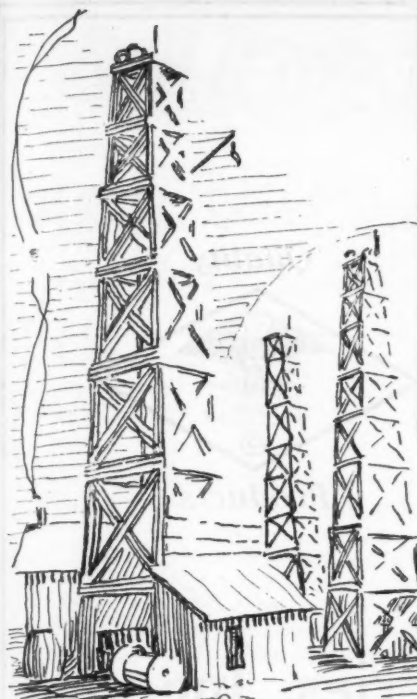
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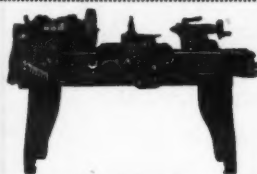
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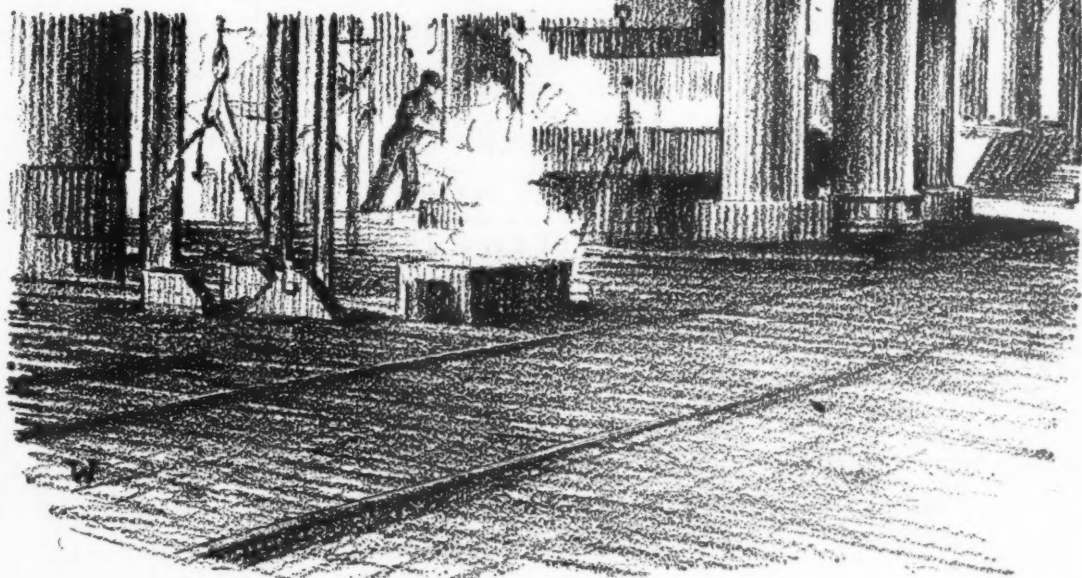
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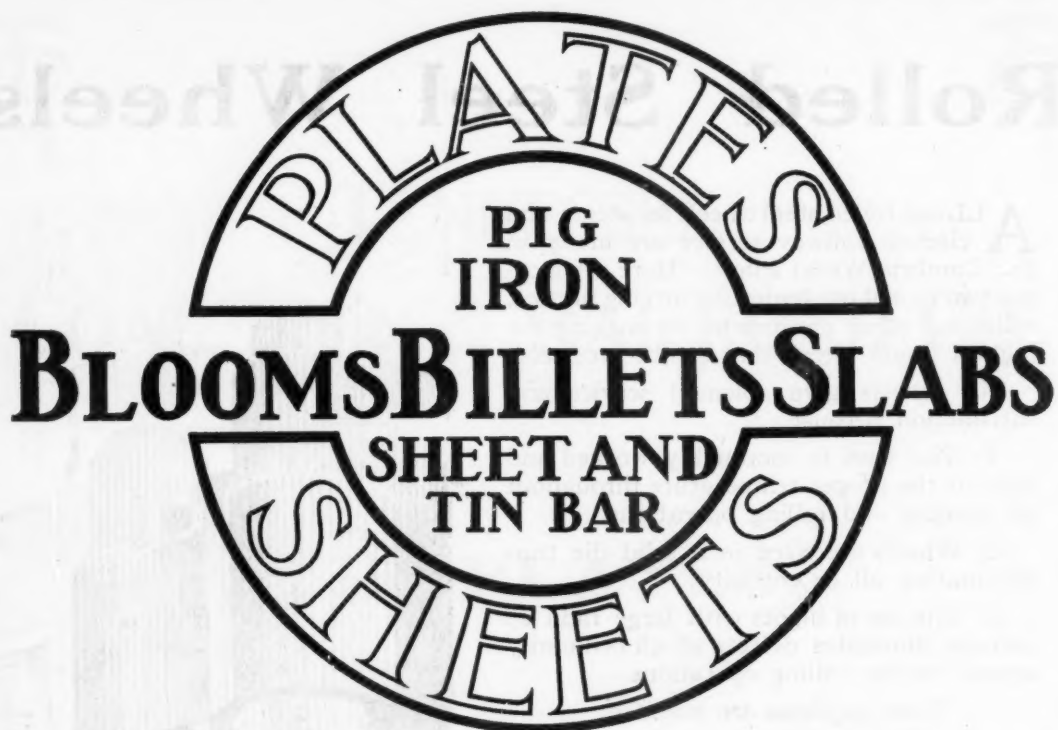
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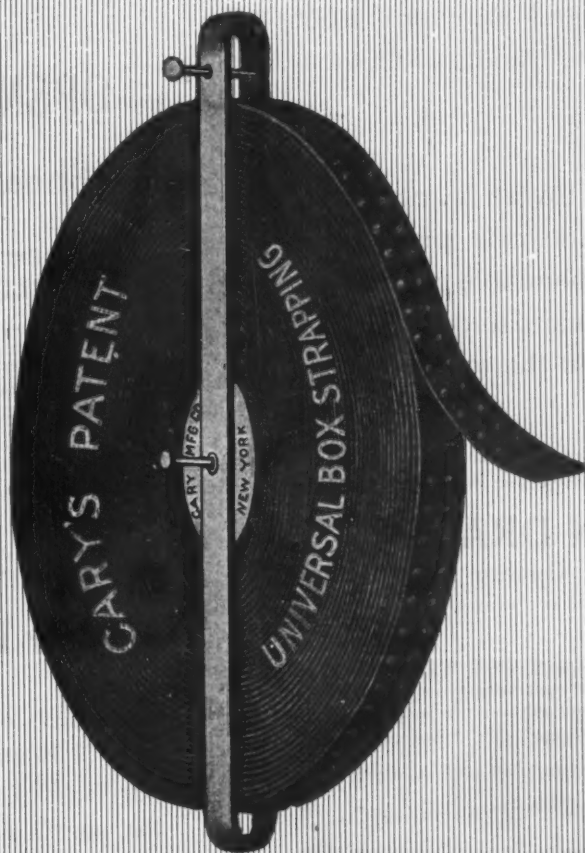
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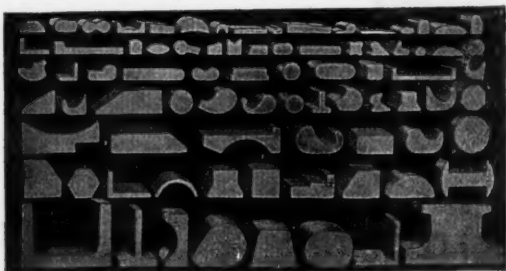
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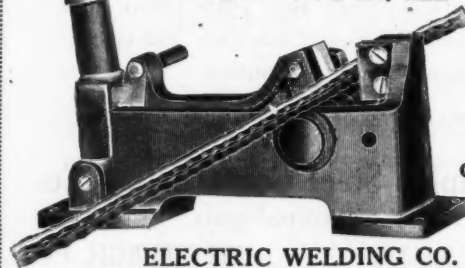
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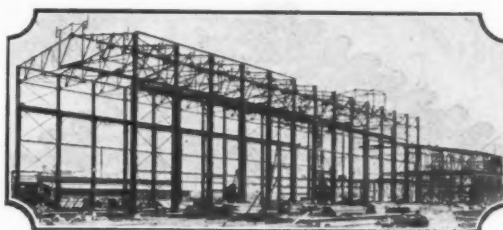
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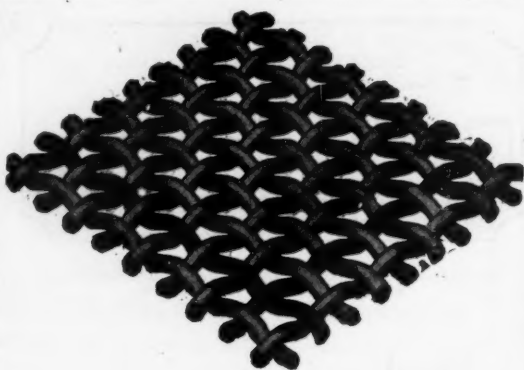
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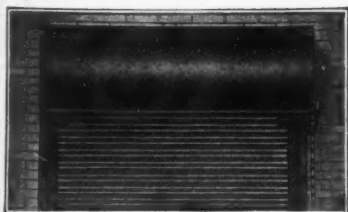
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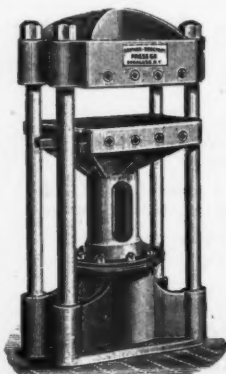
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And if you have any doubt about it just sit still for five minutes and run over in your mind your experience with Mr. Electric Elevator which has been holding forth upon your premises.

It is Dollars to Doughnuts old Mr. Electric Elevator has been the cause of more brimstone conversation in your

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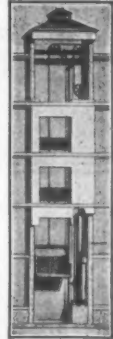
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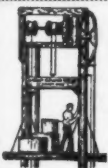
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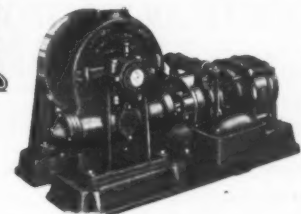
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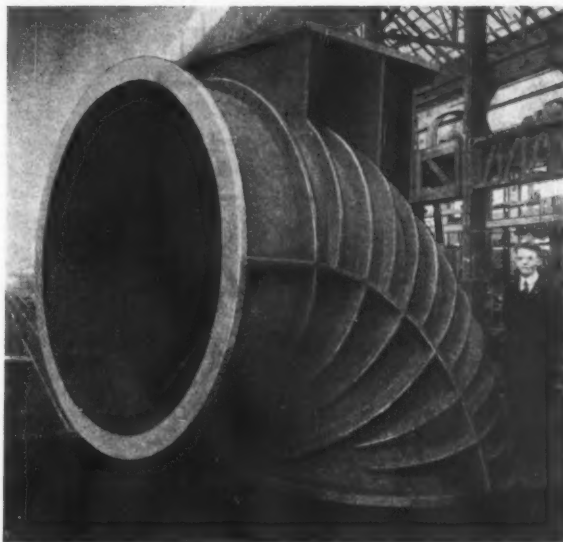
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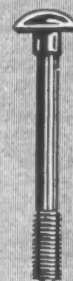
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The steady rise in cotton will add over \$750,000,000 to the purchasing power of the South—the first section of the country to show real evidence of business revival.

Industrial activities are expanding, building construction is increasing and public work, especially road building, is being pushed harder than ever.

The South will need equipment and material of all kinds.

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\$750,000,000 Added to South's Purchasing Power

Cotton Advance Stimulates Industrial and Construction Activities.

THE steady rise in the price of cotton during the last few weeks has added over \$750,000,000 to the purchasing power of the South. This means that a vast amount of money will be turned loose in the South. Debts will be paid. All kinds of products, building materials, machinery and supplies will be bought, the purchase of which even a month ago would not have been deemed possible. Business generally will be developed and stimulated in every part of the Southern States.

Added to this splendid increase in cotton is the great progress made in diversified farming, the large production of foodstuffs, the greatest peach and watermelon crop ever raised and shipped to the North at profitable prices, while the great citrus fruit crops of the South will soon move to market and undoubtedly bring good prices.

Industrial activities generally are expanding; building construction is increasing and plans for many important structures that have been held in abeyance are now being revived and put under contract. Public work of all kinds is being pushed with great vigor.

All of these evidences emphasize the fact that the South is the first section of the country to show a real business revival. The same unconquerable energy with which the South has met every adverse condition since 1865 is being put forth at the present time. The South can now begin to sing a song of optimism; it can begin to rejoice in the turn of the tide from poverty to prosperity.

The B. Mifflin Hood Brick Company is emphasizing these facts because we know what this splendid increase in the price of cotton means to our section, and how it is going to stimulate activity in every direction.

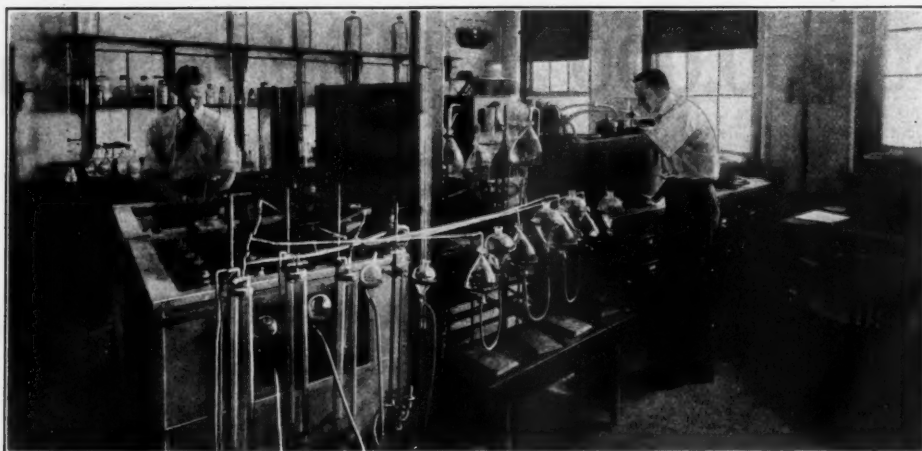
All of the plants of this company are in the South. Everything that we have is invested in this section, and we take pride in its wonderful developments. Our faith in the future and the steadily increasing demand that is coming for materials and supplies of all kinds is evidenced by the thorough way in which we have fully prepared ourselves to meet it.

Our plants are located in Georgia, Alabama, Tennessee and North Carolina, where the best shale and clay deposits are found. The equipment and facilities of these plants are modern in every respect and have been developed from years of experience in the ceramic industry.

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In this laboratory, solubility research is conducted on the materials used in the production of dyes as well as the products of the intermediate processes.



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The solubility of a dyestuff is one of its most important qualities. A dye which is perfectly soluble in the vast majority of cases is one that has been prepared from pure intermediates by the correct formula.

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The purity and solubility of Du Pont Dyestuffs are the result of a thorough knowledge of all the qualities of the chemicals that go to make them. Note their solubility.

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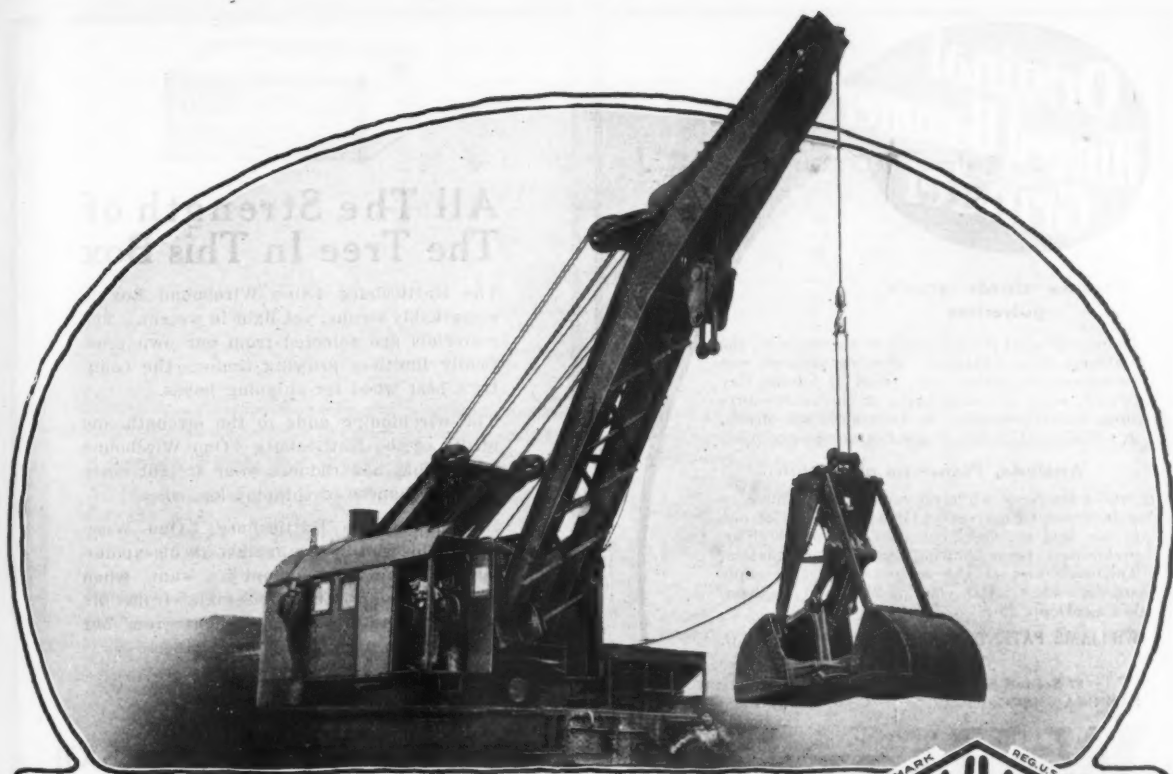
Dyestuffs Department

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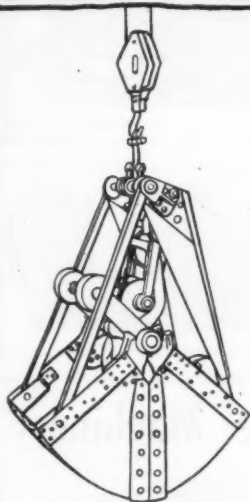
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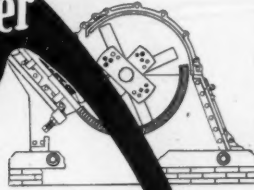
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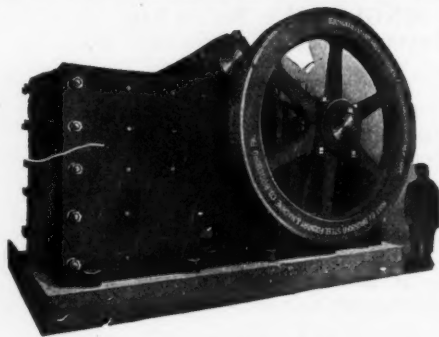
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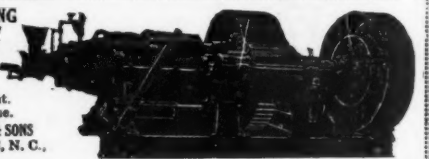
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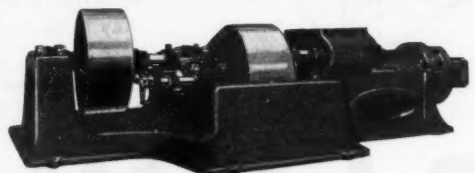
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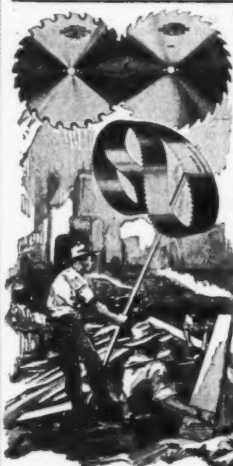
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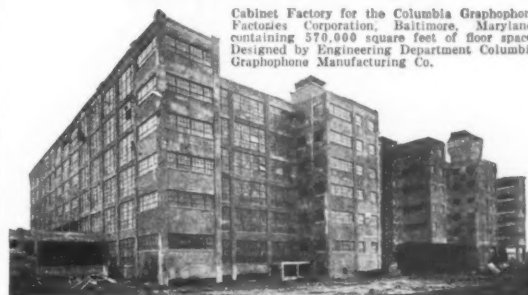
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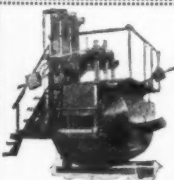


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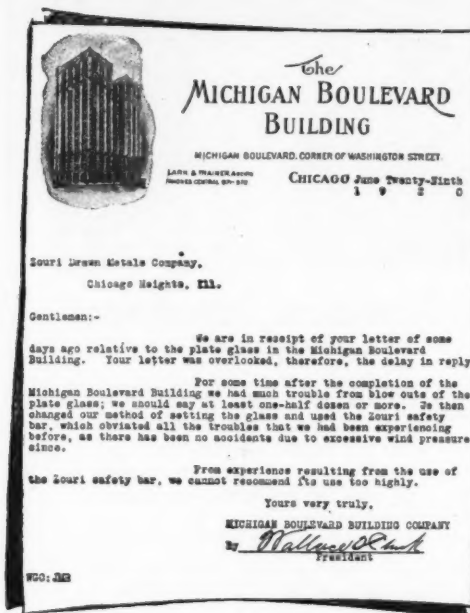
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Manufacturers Record

Exponent of America

OCTOBER 27, 1921.

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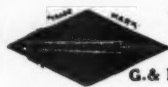
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Vol. LXXX, No. 17
WEEKLY.

BALTIMORE, OCTOBER 27, 1921.

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STRIKE.

IF the railroad men undertake to strike, there will be a strike on the part of the people of this country against them which will be of infinite value, for it will convince the railroad strikers that they can no longer hold the sovereignty of America under their heels; and it will convince the American people that men can be free once more, and no longer be absolutely under the domination of Union Labor.

We believe a large proportion of the American people will welcome the strike and rejoice in the opportunity to give to the railroad men such a licking as no union labor element in this country ever had.

LET US BE THANKFUL.

Ex-Secretary of the Treasury David F. Houston in an interview at Houston, Texas, a few days ago gave it as his opinion that it would require 10 years more for conditions to return to normalcy. Had Mr. Houston remained at Washington in official capacity it would have required 100 years. In spite of Mr. Houston, however, we expect to see normal conditions by January 1, next.—Dallas Cotton and Cotton Oil News.

We are glad to see that Ex-Secretary Houston is thus properly appraised at his real value in the State of Texas, in which he so long lived. What a blessing it would have been to the country, and how many billions of dollars would have been saved if President Wilson had realized the littleness of the brain power of Mr. Houston, or else of his willingness to do the things which if continued would, according to the Oil News, have kept us in the business chaos of the last twelve months for one hundred years to come. Let us be thankful that he is out and out forever.

NO MORE ADAMSON BILL SURRENDERS WANTED.

The critical condition calls for the exercise of wise statesmanship. In 1916 the condition was acute and serious. It was met then by a great President who, with wisdom, settled the trouble.

The country will back President Harding and hope he will act with like wisdom and promptness.—Kaleigh News and Observer.

We didn't think that even Josephus Daniels would go so far as to commend the Adamson bill as a wise measure. It was the most cowardly, ignoble, disgraceful, socialistic, anarchistic, Bolshevistic, asinine surrender of the nation's sovereignty ever made in our history, and may Heaven save us from any more acts of that kind. President Wilson, it is true, urged the surrender, but every Congressman, Republican or Democrat, who voted for it pusillanimously voted to betray his country. President Wilson would never have put that measure through if he had not been surrounded by a lot of spineless advisers in the cabinet and by spineless senators and members of the house, all eager to capture the so-called labor vote.

Imagine Grover Cleveland surrendering the nations honor to four hold-up men! No, the human imagination cannot be stretched that far.

Commenting on this, the Columbus (Ga.) Enquirer Sun very truly covers the whole situation when it says:

"What a fortunate thing it is, the present incumbent of the White House hasn't a Son-in-law McAdoo at his elbow, to tell him to compel the railroads to surrender what is left of them.

"If, then, the matter takes the course it should take—a fair fight and no favor, in the event there is to be a strike—we are very much of the opinion that good is going to come of it. For, in the end, it is going to be abundantly demonstrated that the people and the government are bigger than anybody's union, or any dozen or forty unions—and that's all there is to it.

"Moreover, the public is in no humor to be run-over any longer. The public has suffered enough; has stood about all it can stand in the way of high prices (meaning, in most instances, high wages) and it is not going to definitely permit any group of men, be they autocrats of labor or autocrats of wealth, to twist the screws any tighter.

"And, on top of all this, the people have learned—farmers as well as merchants and manufacturers and bankers—that their prosperity is mighty closely tied-up with their country's transportation system. Also, that, no matter who owns the bonds and stocks of these railroads, they really belong, in a much larger sense, to the people as a whole, and that whatever tends to cripple and destroy them, is in a very large degree, a direct injury to the public. Hence it is that, in such a strike as is proposed—a strike to tie-up the country's entire transportation system—a greater blow than even an invading army could hope to strike—the people's sympathies are going to be with themselves. And without this public sympathy the strikers cannot hope to win.

"For conclusive proof of this, we need only look to the recent disastrous strike on the A. B. & A., railway in this state.

"So that as we see it this nation-wide railway strike—if the brotherhoods ever dare to make good their bluff—is going to settle some things that need to be settled; some-

thing, indeed, that would have been settled, and settled right, four years ago if Mr. Wilson and McAdoo hadn't interfered.

"And the thing to be settled is, whether or not the *rule of reason and equity* is to prevail in the fixing of wages in this country, or whether the unions may exact whatever wage *they may see fit to demand*. But, even more than this, as we before remarked, it is going to settle whether or not the people and their government are *bigger than anybody's union*.

"So, for our part, we are perfectly willing to see the matter put to the test, and have done with it. The industrial and commercial peace and prosperity of the country demand that the matter be settled once for all, while labor, itself, will be far better off and more contented when it learns, beyond all doubt, just how it is being misled into these impossible wage wars."

RAIL AND WATER ROUTE BETWEEN WESTERN AND PACIFIC COAST POINTS.

A NEW movement of traffic, already considerably developed and which is increasing, is that between Middle West points and the Pacific Coast by way of Atlantic and Gulf ports and the Panama Canal. A Mobile correspondent of the MANUFACTURERS RECORD, writes as follows about the movement as seen at that port.

"The intercoastal steamship lines have brought about a readjustment of the trade between the Eastern and Western states, and commodities which formerly would move from interior points, and in which the Eastern states or the Gulf would not be interested, are now moving from the Atlantic seaboard and from the Gulf via the intercoastal lines."

Steamship service to which this letter refers is now conducted from ports on the Atlantic and the Gulf coasts to Los Angeles, San Francisco, Portland and Seattle, as well as to ports in British Columbia and it is important, in this connection to observe that the Atlantic-Gulf & Pacific Steamship Corporation, a Baltimore enterprise, finds itself able to handle shipments from the Middle West to a Pacific Coast at freight rates very much lower than the direct rail rates. For instance, shipments from Cleveland, Ohio, via rail to Baltimore, and thence via steamers through the Canal to San Francisco can be carried at a rate 40 per cent less than the all rail rate westward from Cleveland to San Francisco. Of course the farther west that freight originates the less saving is accomplished by the rail and water route, but this line is also getting freight out of Chicago and even from points in Wisconsin for transportation to the Pacific Coast via the Panama Canal. Freight from St. Louis is also being sent via the Canal to Pacific Coast cities, but this traffic, of course, goes via Gulf ports on ships of the same company, —from Mobile for instance. The Gulf ports have a differential rate, as compared with eastern ports, so shipments via the Gulf may originate farther west and still be able to present an advantage in cost of transportation via the rail and water route over shipments going via the eastern ports. Just how far west business can be obtained without establishing a freight rate that would equal the direct rail rate is not yet apparent, but in the case of some kinds of freight the rapidity of the direct rail route as compared with the rail and water route would be taken into consideration, this especially applying to easily perishable products.

Among additional lines operating between the Atlantic and Gulf ports and the Pacific Coast may be mentioned the Matson Navigation Co., the Pacific Mail Steamship Co., the United American Lines, etc. Not only have the several companies developed much freight business, but a considerable passenger traffic has also been created.

Instead of railroads meeting those low rates and saving

their business, some railroad influences are working to befuddle the situation by creating an impression that to free from Canal tolls all American coastwise vessels would be to break faith with England in our treaty. That position is absolutely false and the railroad propaganda to that effect is a reflection upon the intelligence of American people.

STEEL RAILS CUT FROM \$47 TO \$40 A TON.

JUDGE Elbert H. Gary, Chairman, United States Steel Corporation, announces a cut of \$7. a ton in steel rails. His statement follows:

"We have decided to recommend that our subsidiary companies reduce the selling price of standard rails to \$40 per ton base, f.o.b. our mills. The present costs of production do not justify this action, but it is hoped and expected that reductions in freight rates and otherwise, together with larger operations, will soon have a beneficial effect upon our costs."

ROTTEN WITH IMMORALITY

THE State Bank of Brookings, Oregon, has filed an injunction in the United States District Court against the Federal Reserve Bank of San Francisco, claiming that the latter is "using its power and resources to annoy, embarrass and cause expense to the country state banks until they are willing to open non-member accounts or to clear at par for checks sent to them."

The appeal by the State Bank of Brookings rehearses what has come to be apparently a universal matter in the effort of these state banks to save themselves from the destructive policies of the Federal Reserve System. One of the most incomprehensible things which this country has ever faced is the bull-headed determination of the Federal Reserve System to crush out state banks through methods which the Supreme Court said was "warfare upon state institutions"; and yet the administration permits this condition to go on, though it is rotten with immorality and endangers the safety of the entire banking system of the country.

A FARMER'S VIEW ON LABOR UNIONS.

S. H. Gaitskill

Breeder of

Shorthorn Cattle and Duroc Hogs.

McIntosh, Florida, October 11, 1921.

Editor Manufacturers Record:

I want to thank you for giving us the sermon by Dr. Hillis. Although it was delivered some years back it fits today as well as it did when delivered. The same principle controls in the Union today. The same Samuel Gompers is at the head of it, and the same denial of countenancing violence, although the Union says: "There shall be no coal mined in West Virginia, except it be mined by Union labor, no matter how many coal miners there may be at work satisfied with their jobs." The Union says: "We will kill, burn and destroy if we are not allowed to have our way."

On what has Caesar fed that he has grown so great? Why are they better than other men, that they should be allowed to ignore and trample upon the rights of others, to be above and beyond all law, civil and moral? The Unions have fully demonstrated that, given the power, they would rule the world with utter disregard to the rights of others, showing no mercy to those disagreeing with them. Their demand for the Adamson law at the time and under the existing conditions, fully told the story of their love for their fellow man, whom they could not control.

S. H. GAITSKILL.

Amazing Industrial Development of the South as Revealed by the 1920 Census.

BETWEEN 1880 and 1920 the amount of capital invested in manufacturing in the Southern States jumped from \$329,752,000 to \$6,885,546,000.

The value of the South's manufactured products during this forty-year period increased from \$622,840,982 to \$9,808,114,000.

The increase in capital invested in manufacturing enterprises in the South between 1910 and 1920 was \$3,999,618,000, or 138 per cent, while the value of manufactured products in the South increased in ten years by \$6,649,725,000, or 210 per cent.

In 1880 the South's proportion of the country's total manufacturing capital was 11.8 per cent, in 1900 it was 13.3 per cent, in 1910 15.6 per cent and in 1920 15.4 per cent. It is gratifying to know that industrially the South practically held its own during the last ten years in the proportion of capital invested as shown in the 1920 census of manufactures notwithstanding the enormous magnitude of the development of war plants in the North and East through Government cooperation.

In the value of its manufactured products the Southern States made a slight increase in proportion to the rest of the country, for the proportion of the value of manufactured products in the South to the whole country in 1880 was 11.6 per cent, in 1900 it was 13.7 per cent, in 1910 it had increased to 15.3 per cent, and in 1920 to 15.6 per cent.

THE SOUTH'S MANUFACTURING PROGRESS, 1880-1920.

(Figures deal with actual factories having annual production over \$500. Hand and building trades and neighborhood industries excluded.)

States.	Capital Invested (Census Years)			
	1880.	1900.	1910.	1920.
Alabama	\$9,668,008	\$60,165,904	\$173,180,038	\$452,912,000
Arkansas	2,953,130	25,384,636	70,174,345	138,818,000
District of Columbia	5,552,526	17,960,498	30,552,623	63,008,000
Florida	3,210,680	25,682,171	65,290,643	206,294,000
Georgia	20,672,410	79,303,316	202,777,665	448,932,000
Kentucky	45,813,039	87,995,822	172,778,805	276,535,000
Louisiana	11,462,468	100,874,729	221,816,398	462,209,000
Maryland	58,742,384	149,155,313	251,226,828	619,607,000
Mississippi	4,727,600	22,712,186	72,393,485	154,117,000
Missouri	72,507,844	223,781,088	444,343,135	939,691,000
North Carolina	13,045,639	68,283,005	217,185,588	669,144,000
Oklahoma		4,054,391	38,872,938	277,034,000
South Carolina	11,205,894	62,750,027	173,220,870	374,538,000
Tennessee	20,092,845	63,140,657	167,923,784	410,203,000
Texas	9,245,561	63,655,616	216,875,579	588,797,000
Virginia	26,968,990	92,299,589	216,392,388	464,517,000
West Virginia	13,883,390	49,103,138	150,922,586	339,190,000
Total	\$329,752,408	\$1,196,302,086	\$2,885,927,698	\$6,885,546,000
United States	\$2,790,272,600	\$8,978,825,200	\$18,428,270,000	\$44,678,911,000

States.	Value of Products. (Census Years)			
	1880.	1900.	1910.	1920.
Alabama	\$13,565,504	\$72,109,929	\$145,961,638	\$492,731,000
Arkansas	6,756,159	39,887,578	74,916,367	200,313,000
District of Columbia	11,882,316	16,426,408	25,289,136	68,826,000
Florida	5,546,448	34,183,509	72,889,659	213,327,000
Georgia	36,440,948	94,532,368	202,863,262	693,556,000
Kentucky	75,483,377	126,508,660	223,754,497	395,660,000
Louisiana	24,205,183	111,397,919	223,948,638	676,190,000
North Carolina	106,750,563	211,076,143	315,669,150	873,945,000
Mississippi	7,518,302	33,718,517	80,555,410	197,747,000
Missouri	165,386,205	316,304,095	574,111,070	1,599,264,000
Maryland	20,095,037	85,274,083	216,656,055	943,808,000
Oklahoma		8,133,936	53,682,405	401,383,000
South Carolina	16,738,008	53,335,811	113,235,945	381,454,000
Tennessee	37,074,886	92,749,129	180,216,548	556,253,000
Texas	20,719,928	92,894,433	272,895,635	999,996,000
Virginia	51,780,992	108,644,150	219,793,858	641,810,000
West Virginia	22,867,126	67,006,822	161,949,526	471,871,000
Total	\$622,840,982	\$1,564,183,490	\$3,158,388,799	\$9,808,114,000
United States	\$5,369,579,191	\$11,411,121,122	\$20,672,052,000	\$62,910,202,000

Missouri, with \$939,691,000 of manufacturing capital leads the individual Southern States in capital invested and in the value of its products, which amounted to \$1,599,264,000 in 1919. This State in ten years more than doubled its manufacturing capital and nearly trebled the value of the products of its factories.

North Carolina, with capital invested in manufacturing of \$669,144,000 and producing \$943,808,000 worth of manufactured goods, stands out strikingly for the rapidity of its industrial growth. Next to North Carolina comes Maryland, with \$619,607,000 manufacturing capital and factory products valued at \$873,945,000; Texas with manufacturing capital of \$588,797,000 and products of \$999,996,000; Virginia with \$464,517,000 of manufacturing capital and factory products of \$641,810,000, followed in order by Kentucky. Alabama and Georgia. North Carolina's industrial development points the way to many other Southern States as to the proper utilization of undeveloped resources. Alabama, with natural resources equally varied and additionally with coal and iron in vast quantity, in the last ten years has not increased its manufacturing as rapidly as has North Carolina during that period. In fact, every Southern State might well emulate North Carolina's example in creating a larger industrial development, great as has been the progress all have made.

The total amount of capital invested in manufacturing and in mining, quarrying, and oil well drilling operations in the South in 1919 amounted to \$9,160,055,000 compared with \$3,542,940,000 in 1909. The total value of the combined output was \$10,935,689,000 in 1919 and \$3,371,929,000 in 1909.

The magnitude of the South's industrial operations is thus shown in the last census to be in capital invested \$9,160,-

055,000 and in value of output \$10,935,689,000, counting under the head of industrial development all manufacturing, mining, quarrying and oil well drilling work.

In the following table comparing mining, quarrying and well drilling operations in the United States and the South for 1919 and 1909, it will be seen that the rate of progress

in the South has far exceeded the rate of the rest of the country.

COMPARATIVE STATISTICS CONCERNING MINE, QUARRY, AND WELL OPERATIONS IN THE UNITED STATES AND THE SOUTH—1919 AND 1909.

	Producing Enterprises. 1919	1909	Per cent Increase
Number of enterprises			
South	6,965	4,429	57.3
United States	21,280	19,915	6.9
Number of mines and quarries			
South	4,430	4,287	3.3
United States	13,766	15,164	*24.2
Number petroleum and natural gas wells			
South	91,678	30,995	195.8
United States	260,673	166,320	56.7
Persons engaged			
South	329,468	235,474	39.9
United States	1,077,570	1,041,682	3.4
Salaried employees			
South	28,906	11,851	144.0
United States	74,154	44,127	68.0
Wage earners, (average number)			
South	295,853	218,942	35.1
United States	981,509	967,633	1.4
Power used (horsepower)			
South	1,983,545	974,092	103.6
United States	6,724,057	4,608,253	45.9
Capital			
South	\$2,274,509,653	\$657,011,924	246.2
United States	\$6,955,466,831	\$3,380,525,841	105.8
Salaries			
South	\$54,602,756	\$13,017,425	319.5
United States	\$149,328,985	\$53,393,551	179.7
Wages			
South	\$353,108,378	\$109,177,460	223.4
United States	\$1,295,928,275	\$586,774,079	120.9
Contract work			
South	\$55,371,061	\$8,494,706	551.8
United States	\$81,418,289	\$28,887,898	181.8
Supplies and materials			
South	\$207,937,758	\$35,318,398	488.7
United States	\$555,222,936	\$202,729,754	173.9
Fuel and power			
South	\$33,958,382	\$9,031,531	275.9
United States	\$122,095,768	\$45,136,550	170.5
Royalties and rents			
South	\$82,441,950	\$16,359,926	403.9
United States	\$174,393,730	\$63,973,585	172.6
Taxes			
South	\$36,514,508	\$2,296,420	1490.0
United States	\$140,998,714	\$17,796,763	692.3
Value of products			
South	\$1,127,574,868	\$213,540,100	428.0
United States	\$3,228,023,845	\$1,238,410,322	160.7

(*) Decrease.

A STATE WHOSE ANNUAL PRODUCTION EXCEEDS ITS ASSESSED PROPERTY VALUATION.

RICH in mineral resources—more than fifty different kinds—including coal, oil, gas, bauxite, manganese, zinc, lead, and even diamonds; a blue ribbon winner in world fairs with its apples; a big producer of peaches, cotton, strawberries, rice and cantaloupes and also of other Southern farm products; a heavily timbered and bountifully watered state, and one famous the world over for its healing springs and its health resorts, Arkansas resents the aspersions which have been cast on its character by some writers for the press, and friends of the state are arising to a vigorous defense. Writing from Chicago to the MANUFACTURERS RECORD, G. A. McWilliams, president of the McWilliams Dredging Co., says:

"We have as contractors for the past 18 years been engaged almost continuously in the development and draining of Arkansas swamp and overflowed lands and have during that time purchased several million dollars of tax or drainage district bonds, and in no instance have we met with any spirit or attempt at repudiation or evasion of the payment of interest and principal of any of the securities we have handled. We believe in Arkansas and know it is a state of wonderful possibilities and that it has a great future.

"There are many thousands in the North and East who are owners of Arkansas securities who, in the writer's opinion would be interested in the statements of Governor Brough and we trust you will find in this article material you can use in an early issue of your very valuable publica-

tion, the MANUFACTURERS RECORD, to which we have been subscribers for many years."

The statements by Ex-Governor Brough, to which reference is made in the foregoing letter, are embodied in a recent article in the Memphis Commercial-Appeal. In it Governor Brough refutes the idea, seemingly "prevalent in some sections of the United States" that "Arkansas' securities are worthless, that its property has been confiscated and that the people of the state are on the road to bankruptcy." The facts are, he declares, "that the principal and interest on practically all of the Arkansas bond issues have been promptly paid, and that an era of progression has been ushered in unparalleled in the history of the state."

The Arkansas Advancement Association, formed last June, "to combat the prejudice and misinformation that exists about the State of Arkansas in various sections of the Union and to arouse a pride in the resources and possibilities of Arkansas on the part of the citizens of the state," has perfected local organizations in nearly 30 counties of the state, says Governor Brough. "The association proposes to carry the gospel of Arkansas into every state of the Union and an immense amount of information and reliable statistics is being collected and compiled."

After citing the various mineral, timber, horticultural and agricultural resources and developments of the state, Governor Brough concludes with the statement that "Arkansas is the one state in the Union whose income producing power annually exceeds the amount of invested capital and is greater than the assessed valuation of its property. The annual value of Arkansas crops, timber and minerals in 1919 was about \$789,000,000, while the assessed value of Arkansas' property for the same year aggregated but \$598,000,000." A very remarkable showing indeed.

MEN WHO AIM TO CREATE UNREST AND TURMOIL.

THE Greater Miami Employers' Association of Miami, Florida, have issued to the people of that city a letter well worth studying by the people of other cities. It is as follows:

"Mr. Robert Corley, general organizer of the International Association of Machinists, gives a good definition of the Union organizer. A letter of the Associated Employers of Indianapolis quotes from his speech to a mass meeting at Connersville, Indiana. The remarks, according to the letter, were taken down at the time by a shorthand reporter.

"Mr. Employer," said Mr. Corley, "if there is any present: if you base your opinion and your argument on the fact that an organizer or representative of labor is a man traveling over the country to create an unrest, let me say to you, employer, then your definition or idea of an organizer and representative of the labor movement is correct because if the working man is satisfied with his conditions, satisfied with his surroundings, satisfied with his way of living, I want to say to you that I will travel this country and do my utmost to create an unrest and discontentment in the mind and heart of that man to relieve matters of that condition. * * * * The first thing you know I am going to give some of these Connersville employers ample room to say that I am creating or trying to create an unrest, and I am if I can. I am here to create excitement and unrest." * *

"Do you realize that there is hardly a week goes by but some international organizer visits Miami? Your Association is constantly meeting and handling these situations as they arise.

"We need your help in one respect. Give all your work and all your patronage to the 100% Open Shop man—we don't mean, now, the man who merely says, 'Oh yes, I believe in Open Shop'—we mean THE 100% OPEN SHOP MEN. And they are here—employees—in every line of work—the men who have stood fairly and squarely and openly by the Open Shop. Give them your patronage and tell them why you are doing so."

RAILROADING SHOULD HAVE THE BENEFIT OF MODERN INGENUITY.

BY COURTESY of the Nation's Business we publish elsewhere in this issue an authorized interview with Mr. Henry Ford in which that Detroit manufacturer states briefly some of the things he would undertake to do if entrusted with the task of administering the railroads of the United States. Some of his ideas are foolish, but many of them will catch the imagination of the nation. Under the cold, prosaic test of practice each and every one of the things he advocates may prove to be a failure. Experiment alone can tell. But the one fact established beyond all question is that Mr. Ford, although able so far to make operative only a part of his program, has wrought a railroading miracle. He has done so, one might say, by overleaping the bulwarks of governmental and union labor dictation and by smashing to pieces the whole concept of railroad service so far as the fundamental financing of it is concerned.

We said many months ago, and we have repeated the suggestion since, that railroading in America has settled into a routine of inefficiency, a dull running-about in circles, and that a fundamental solution of our transportation difficulties could be got only by an examination de novo of the entire situation by a special commission of industrial leaders of imagination and initiative who would have the hardihood and the ability to tear away the whole superstructure of antiquities on which transportation depends and map out a new, economic, nation-serving and constructive program for 100 per cent distribution in the future. Mr. Ford has said enough, briefly as he has spoken, to convince any sane man that not only is the appointment of such a commission advisable, but even that it is absolutely imperative.

We believe that such a commission, properly constituted, could reasonably expect its verdict to be translated by Congress into definite national policy. We believe the effect would not only be the saving of hundreds of millions annually to the American people directly, but that the saving indirectly would be even greater. We believe that the sure outcome would be the development of the roads to the point where they could handle the business of the country—which confessedly they could not do in the summer of 1920. We believe that such a commission would bring into railroading the benefits of modern ingenuity, including use of better methods of fueling, utilization of vast but undeveloped water powers and various other economies, the non-use of which is notably disastrous.

Like Topsy, American railroad practice, even if it is the best in the world, has "just grown." So has the destructive system of arbitrary regulation. So has labor union domination. So has the method of financing. So has the method of dispatch. There is no way out of the wilderness of precedents and professionalism except through a new-cut path. Such a path the railroads themselves will never find. They have been lost so long that they like it. But the business genius of the nation, which has left railroading far behind, can find a sovereign cure, and will find it if given the opportunity, without interference by politicians.

By all means let us have a fundamental solution of the railroad problem. The way to get it is by the initiation of an entirely new and modern program, to be definitely followed for a term of years, and a commission such as we have outlined can evolve such a program. This commission should include men like Gary, Schwab, Ford and others who have created vast enterprises by economy of production, and men of this type rather than railroad men per se should comprise the majority of the committee.

ST. LAWRENCE CANAL AND POWER PROJECT WILL BE WIDELY BENEFICIAL TO UNITED STATES, AN EXPERT DECLARES.

THE St. Lawrence ship canal and power project is strongly commended by Paul T. Brady, in a recent letter to the New York Commercial. Mr. Brady has long been identified with important hydroelectric developments in the South and elsewhere, and speaks with authority when he discusses the St. Lawrence river development, which he regards as an undertaking that will be mightily advantageous to the United States. After pointing out that few of the statements recently appearing in the newspapers in opposition to the project have been based on facts, and have thus been misleading and "undoubtedly are the result of careless statements or an intentional purpose to injure a project of great merit," Mr. Brady quotes from the report of Col. J. G. Warren, Corps of Engineers, U. S. Army, 1919, as to the feasibility of the canal. "The Great Lakes system", says Col. Warren, "forms one of the world's greatest highways for water-borne transportation. The Great Lakes fleet moves more than 100,000,000 tons of freight each season. The greater part of this commerce is in the so-called 'bulk-freight,' consisting of iron ore, coal, grain and limestone. This is carried in a peculiar type of vessel known as the 'bulk freighter.' The bulk freighters are highly specialized boats which have been developed by the conditions of the lake trade. These vessels are from 280 to 625 feet in length and have a carrying capacity of from 3,000 to 15,000 short tons. Most of them can be loaded to a draft of about 22 feet. They are the most economical carriers in the world their rates usually being less than one-tenth of a cent per ton-mile, and sometimes only a third of that amount. Rail rates are several times as much, often being at least ten times the water rates. The annual saving over the cost of moving this same freight by rail exceeds a quarter of a billion dollars.

"Under the conditions of 100 years ago, the only ships which could navigate the Great Lakes systems and enter the harbors were small vessels drawing about five feet of water. The United States has spent about \$135,000,000 in improving the harbors, deepening and straightening the channels and building locks on the St. Mary's and Niagara rivers. The Canadians have done similar work on a smaller scale. As a result there is now available a ship channel through and between the upper lakes with a controlling depth of 21 feet at mean stage. All the important harbors have corresponding depths. From Lake Erie through the Welland Canal, Lake Ontario and the St. Lawrence river to tidewater at Montreal, the controlling depth is 14 feet."

Notwithstanding the present shallow channel of the Welland Canal (14 feet) which bottles up the great mass of the Great Lakes freight, so that it cannot get below Buffalo, Montreal is the second port in shipping tonnage in the northern hemisphere. The Canadian government is now again deepening the Welland Canal to a depth of 25 feet. The work, yet to be done, in providing a deep channel from the lakes to the sea, is the removal of the barrier between Ogdensburg and Montreal. It is Mr. Brady's belief that the Canadian government will make that improvement as well, whether or not it receives the cooperation of the United States.

Even under present conditions a large part of the traffic of the central west is seeking an outlet at Montreal. The railroad terminals in and about Montreal had on September 1, 2,000 cars of Canadian grain awaiting elevation for shipment abroad. There were 67 vessels in the harbor and the river waiting their chance to be loaded.

The elevators were filled with American grains, the Canadian elevator capacity having been secured by American ex-

porters ahead of Canadian shippers. American grain was thus seeking Canadian export in preference to export from New York and other American ports.

Objections to this government expending money in the construction of a canal in a foreign country are answered by Mr. Brady with a reference to the Webster-Ashburton treaty, by which all the avenues of transportation by water through the great lakes or rivers to the ocean are to remain open, free for all time to the commerce of the world. Thus the United States has untrammelled rights in the Welland Canal, although the past and present expenditures for its improvement have been made wholly by Canada. Furthermore, the improvement in it entirely is not altogether in Canadian territory, part of it being wholly within the United States.

Engineers' reports show that the canal and power project complete will cost approximately \$270,000,000. The power plant would include all buildings, water wheels, generators, switchboard and other auxiliary apparatus in place, for the development of 1,400,000 horsepower. Under the joint plan of construction proposed, one-half of this power would belong to the United States and one-half to Canada. It is the opinion of some eminent engineers that fully 5,000,000 horsepower can be produced on the St. Lawrence.

While the newspaper charge that the project is being fostered by water power companies is declared by Mr. Brady to be wholly untrue, the question is very aptly asked as to why should power developers be classed as an undesirable element, from which the public is to be carefully guarded. Mr. Brady points out that there is a tremendous waste in allowing water powers to remain undeveloped. Taking engineers' figures to illustrate; If 700,000 horsepower, which would produce 6,132,000,000 horsepower hours, were used in the operation of steam railroads, it would effect a saving of 24,528,000 tons of coal per year—and this for only half of the power generated in the first installation of 1,400,000 horsepower. "Inasmuch as Canada is taking 13,000,000 tons of coal per year from our Pennsylvania field, that draft on our coal pile would also be relieved."

"The development of the St. Lawrence", concludes Mr. Brady, "and the utilization of its power through the states of New York and New England would be a benefit that can scarcely be calculated. The barge canal would be taxed to its utmost capacity to take care of the industries that would be purely local to the state of New York, and the railroads of the country would be taxed to their capacity to secure money to develop their lines so that the produce of the country could be brought to the nearest point of water transportation instead of attempting to haul carloads across the 3,000 miles of the United States."

AMERICA AND ENGLAND MUST STAND TOGETHER TO SAVE CIVILIZATION.

Jacksonville, Fla., Sept. 16, 1921.

Editor *Manufacturers Record*:

I agree with every word of the strictures contained in your editorial page 57 of this week's issue regarding foreign interference with domestic interests, and your justifiable condemnation of the recent deputation from abroad is too temperately expressed. But does not the same criticism apply to any attempts here to handle the Irish situation, (another "domestic question") by resolution of Congress and Senate at Washington? Although President Harding came out with a categorical statement before his election that he considered the Irish squabble a matter of domestic concern to Great Britain alone, in which we should not interfere, there have been prolonged unofficial investigations (with calling of witnesses summoned from abroad at Washington, D. C., as well as discussions in both Senate and Congress. There are certain resolutions also which are only temporarily

tabled pending the result of the parleys between Lloyd George and Valera. These will be resurrected and the debates resumed if the negotiations prove abortive.

Is not the flouting of President Harding's judgment and advice deserving of as much condemnation as the unwarranted and reprehensible interference so properly condemned in your editorial?

J. D. G.

Replying to the foregoing, we fully agree that the Irish question is none of our business. We have no more right to interfere with the settlement of the Irish question than any other country has a right to butt in on our internal affairs. The so-called unofficial investigation in Washington was a piece of "bunk" of the rottenest kind. An effort was made to create the impression that it had some connection with the Government, when as a matter of fact it was a scheme of propagandists working in the interest of Ireland. Any resolution in Congress for or against any Irish settlement is a piece of unspeakable impertinence on our part which Great Britain has a right to resent. The Irish question is one which concerns Ireland and Great Britain. The Irish people are divided among themselves largely on a question of religion,—Protestant and Catholic fighting one against the other. By reason of these factions the people of Ireland as a whole have never been able to reach a mutual basis on which to agree with Great Britain.

Every anti-English, pro-Irish, and pro-German influence in America is being constantly used to try to stir up in this country a hostility to Great Britain not merely for the purpose of helping Ireland, but for the purpose of sowing the seeds of hate between England and the United States.

Any man in public life, it matters not who he may be, who undertakes to influence the sentiment of this country in favor of Ireland and the work of the Sinn Feiners, merely serves to delay a satisfactory settlement of the Irish question.

As we have protested against England trying to interfere with our American interests on tariff and other things, so we protest with equal vigor against the people of this country interfering with the purely English-Irish question, which must be settled by England and not by us.

The hope of the world rests in the closest friendship between the English-speaking peoples of the world. England and the United States are the steady, safe-guarding influences to save the world from destruction. Granting all possible credit to France, and Belgium, and Italy and to the countries of South America, it is nevertheless true that the two great Anglo-Saxon nations and their colonies hold in their hands the destiny of the world's civilization. If they work in harmony the world can be saved from disastrous wars and from sinking back into barbarism; whereas if they should ever be engaged in a murderous war, stirred up by the evil spirits which are ever eager to force England and America at each other's throats, all white civilization would be doomed to sink back beneath the rising tide of the colored races of the world. With between two-thirds and three-fourths of the world's population composed of the yellow and the black races, and with race consciousness rapidly developing among them, white civilization is at stake unless England and America stand side by side. No greater enemy of mankind can be found than those who attempt to sow the seeds of discord between these two great nations.

For four weeks in succession the production of soft coal has climbed steadily upward. The total output during the week of October 1, including lignite, coal coked at the mine, and railroad fuel, is estimated at 8,876,000 net tons. Compared with the week preceding this was an increase of 348,000 tons, or 4 per cent. The week's production was the largest since last January.

If I Ran the Railroads—Ford

An Interview by WILLIAM ATHERTON DU PUY.
Authorized and Corrected by HENRY FORD.*

"If you were operating a railroad such as the Pennsylvania or the New York Central," I said to Henry Ford, at his office in Dearborn, "how would you proceed?"

"In any such case, I would immediately set about accomplishing four things," he replied. "I would reorganize in such a way as to get rid of the unproductive stockholder. I would redesign the rolling stock. I would expedite the delivery of freight. I would discharge unnecessary employees.

"The first thing to be done anywhere is to reorganize by getting rid of unproductive stockholders. The real purpose of a railroad is to serve the public. There is no reason why it should be diverted from that service and set to doing an entirely different thing—putting money into the pockets of stockholders who make no contribution to the road's actual operation. Paying dividends to these people is a burden which should be lifted from the railroads. The greater the overcapitalization, the heavier the overcapitalization, the heavier the burden. It bears them down and prevents them from serving their purpose. In the end the public pays these dividends. They are a tax on the whole people.

"There is a possible and practicable system of financing railroads by which those contributing the money will be in positions to aid directly to the success of the undertaking. If the brakeman on a railroad owns stock in it, he has an additional inducement to competent service. Better service is a valuable by-product which will come from his ownership of stock. If the railroad is a success, it is due to him and his fellow-workmen, and they are entitled to the profit.

"Railroads should not have to go to banks for money. They can be otherwise financed. In fact, finance is the wrong term to use. We talk too much about finance. The first thing is to make a railroad work. Make it possible for people to use it as much as they want to. Then there will be no trouble about finances. The trouble is that we start with finance and expect finance to make the road go. Finance can't do that. Finance is a failure.

"Of course, if such a course were attempted, we could expect a great outcry for the protection of invested capital. It would be said that people had bought these stocks for the financial protection of their families, their children. Protection from what? From the necessity of earning their living. Their children would be better off if they had to finance themselves.

"Proper financing would, of course, be easier on new roads. On the old ones, however, it should be possible to retire the parasite noncontributing stockholder and get the ownership into the proper hands.

"After removing this dividend drain, the second step would be to remove the great physical burden of the railroads—needless weight of its rolling stock. Overweight of rolling stock is the prime mistake on the mechanical side of railroading. Engines and cars are four or five times as heavy as they should be. A freight train is several times the weight of the load it carries, and a passenger train is twenty times as heavy. This dead weight must be moved whether a train is loaded or empty. The cost of pulling empty trains is needlessly large. Contrast this with the efficiency of the bicycle which weighs twenty pounds and will carry a man who weighs 200 pounds."

"It is contended," I suggested, "that weight is necessary to make railroads hold the track."

"Were you ever arrested for speeding?" Mr. Ford countered.

"If so the cop who overhauled you was mounted on a motorcycle that weighed about one-tenth as much as your car, yet it was speedier than you were. The problems of holding the rails can be taken care of in re-design.

"Here is an example of re-design in freight cars. The axle of a car and the wheels upon it operate as a unit almost as though they were one piece. When the car goes around a curve one wheel has to travel farther than the other. Since they are on the same axle and one cannot turn without the other, this makes it necessary that one wheel should slip on the rail. There are theoretical compensations which it is claimed take care of this difference of distance traveled by wheels, but they are not real compensations. The axle connecting these wheels must be very strong to force the slip. To secure this strength the axle must be very thick and heavy.

"What we have set out to do is to design an axle that will allow for this difference in the distance the wheels have to travel, that will make the slip unnecessary. We have already solved the problem. But in doing so we have greatly reduced the weight of the undergear of every car.

"We are not governed in our redesign of rolling stock by what has gone before. We are going to make some revolutionary changes. We find that the present types of rolling stock can be greatly improved. On the Detroit, Toledo & Ironton we are using up the old types of engine and car, but they will be displaced by better types. We will patent our new designs where they are patentable, but we will do this only to prevent someone else from doing so. Some patents are taken out to prevent the free use of ideas. Our patents will guarantee the free use of ideas. We will never proceed against anybody for infringement of our patents. They will belong to the world. Anybody who wants to can use any improvement we make. The Ford organization has never proceeded against anybody for infringement of its patents.

"Great weight in trains, of course, calls for correspondingly heavy rails and ties. The producers of iron and steel have had much to do with the development of railroads. The heavier the engine and the heavier the rail, the greater was the consumption of steel and the greater profit all along the line. The builders of rolling stock have regarded, or have pretended to regard, size as an evidence of advancement. They have long ago passed the point of economy."

"It is said, Mr. Ford," I interjected, "that your claim of the economy of lighter rolling stock is an undemonstrated theory. How do you know that it would be more economical?"

"Well," he replied, "it doesn't do much good to talk about it. Anything that one can say is open to dispute or denial, but whatever one actually succeeds in doing is beyond argument. We have a pretty clear idea of what we are going to do. Once it is done, it won't need any explanation. However, you have got hold of the main principles. We are hauling around too much deadweight. It costs money to do that. The public has got to the point where it cannot pay for the dead weight and live freight, too, so one or the other must go.

"The third step, an immediate step which should be taken in the operation of any great railroad system," Mr. Ford continued, "would be that of expediting the journey of the freight carrier. On the Detroit, Toledo & Ironton we tolerate no idle men, idle cars or idle engines. Loaded cars or trains on side tracks are proof of inefficient operation. They can be made to keep moving.

"If a car takes more time than it should to deliver its load at its destination it is not, of course, earning as much as

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it should for the road. It is just as much waste as it would be for a man to take two days on a one-day job. It is more so, because that car is likely to hold another car back. But here is another point. It is lengthening the time of the turnover of the shipper—and that, too, is a waste of money and everything else.

"Our experience illustrates this excellently. The road we have acquired runs north and south and crosses most of the transcontinental lines. By speeding up our freight on this preliminary part of its journey we have been able to shorten the time of its delivery by periods ranging from seven to fourteen days. This means that our product gets to the people to whom we sell it from seven to fourteen days quicker than it used to. It means that we carry on our books \$30,000,000 less undelivered product than we otherwise would. This is a considerable item. It would be still further reduced if our connecting lines had the slack taken out of them. If all the roads were brought up to schedule, the benefit that we would derive would be better shared by every other shipper in the country.

"When freight is tied up in these unnecessary delays, the rolling stock of the railroad is tied up also. If it takes a road twice as long as necessary to deliver its freight, it will require twice the number of cars. There will be twice as much freight in yards, so they will have to be bigger. All of which is aside from the interference with other traffic. The tax of delayed freight is a heavy one on both industry and the railroads, and an unnecessary one. Freight can be kept moving. I would keep it moving.

This brings us to the fourth point, that of the surplus and inefficient employees. Most railroads have enough lawyers working for them to operate them if they were engaged in useful work. One of the first things is to dispense with the legal staff. A well-managed road needs less of that sort of service. We did just this on the Detroit, Toledo & Ironton. The lawyers are mostly in the claims department, which is one of the most wasteful branches of railroad operation. Any small claim against a railroad is very likely to knock about the claims department for weeks or months, to require endless clerical attention, to clog the machine, to pay it. Proper organization would lead, at the time it is first presented, to establishing the facts about it and settling it on the basis of justice. It would keep all this detail off the books. Few claimants would refuse to settle on the basis of the facts.

"We don't claim to have done anything new in railroading—yet. We have only taken the old system of operation and cut off its obvious absurdities. Even the old system of railroading, brought up to efficiency, would be an immense change for this country. We have simply cut out the loafing of men, the loafing of engines and the loafing of cars. The result seems to have surprised many people. But there is no mystery or magic about it. Anyone can do it. If the introduction of plain, everyday good management will create such a change, what may we not expect from really new ideas?

"The bookkeeping of railroads is complicated far beyond all necessity. I don't want to go into detail, but the amount of unnecessary work you can find in the accounting system of even a little railroad, the amount of duplication and red tape, is almost beyond belief. We have simplified this department, reduced its cost, and have transformed it into an actual help to the railroad instead of a vexation and a burden. How did we do it? By viewing the whole proposition as a service to the users of railroads and making everything fit into that, instead of having the fear of stockholders and dividends before our eyes. Our faith is that service will pay. Finance does not come first. Work comes first.

"When we acquired the Detroit, Toledo & Ironton there were 2,600 people on its payroll. We found almost immedi-

ately that by cutting out the lost motion we could reduce that number to 1,500. This we did. In the interest of better service we raised the wages of all those who remained on the payroll. You can't expect men to work unless they are paid. But you can't pay them until you hitch up managerial ability with their work. Our men earn more and do more, because the way has been cleared for them to do more. And they like it. No man really likes a job that is half inefficiency and half loafing.

"At four o'clock one morning I came in from a trip that I had made to our iron mines up on the northern peninsula of Michigan. At the station I noticed a wrecking train standing on a side track with steam up and went over to inquire what was the matter. I was told that there had been a wreck some twenty miles down the track and that the train was going out to clear it up. I asked if they were ready to start, and they said they were and had been for half an hour. I was told that the track was clear for the run.

"I asked why they did not go, and they replied that they were waiting word from a certain man in authority. They could not start out on the job until he gave that word. In the meantime the track was blocked and a passenger train was being held up. I said: 'Come on; let's go.' We took the train and got to work.

"There are too many bosses of varying rank on all these railroad jobs and their elimination would save a good deal of money."

"The primary argument of your critics," I suggested, "is that your success is due to the fact that you are in a position to divert Ford freight to that line, to thus insure its profitable operation. What is your answer to this charge?"

"How can that be true," asked Mr. Ford, "when the road hauled more tonnage the year before we took it over than it has hauled since we have had it? The figures are all at Washington; why doesn't someone look them up? The great majority of the freight which goes over our road goes over other roads too. The Ford freight that the Detroit, Toledo & Ironton gets only leaves Detroit by our road and is transferred to other roads all the way down the line. We have no monopoly and no great terminals. There isn't any business on our line that some other line doesn't get a generous share of it. Railroad men know this; if they don't they can soon find out."

"If you were asked to operate one of the big systems, such as the New York Central or the Pennsylvania, would you accept the assignment?" I asked.

"Oh, you don't expect me to answer that, do you? I have never had to look for big jobs, and I have never sidestepped one that came to me. What we are doing now is developing and demonstrating principles that will not depend on the personality of any manager. I don't like to appear as criticizing any railroad manager, for I have never done so. With their stockholders on their backs and their banker bosses who don't know anything about railroading, what can they do? They must be liberated from the present system. And you can't do that by giving them \$500,000,000 to perpetuate the present bad system, either."

Plan Large Hotel Building for Anderson, S. C.

Anderson, S. C., October 15—[Special]—The erection of a hotel to cost from \$200,000 to \$250,000 is planned here by the Citizens Hotel Co. It is to be a fireproof structure, containing 100 rooms with modern conveniences.

St. Petersburg Building May Reach \$4,000,000.

St. Petersburg, Fla., October 8—[Special]—Building operations here last month involve the expenditure of \$385,575. The total for 1921 is \$3,489,695 compared with \$2,801,000 for the corresponding period 1920. It is estimated that the total for this year will exceed \$4,000,000.

\$3,500,000 Dam for Irrigation Planned, to Cross Colorado River in Coke County, Texas.

Detailed information about the erection of a dam across the Colorado River near Bronte in Coke County, Texas, is given by Stuart L. Williams, secretary of the Colorado Valley Irrigation Association, Ballinger, Tex., who writes as follows:—

"This dam will be 2800 feet long and 100 feet high and will impound 430,000 feet of water, creating a lake 24.7 miles long with the average width of about one mile.

"It is planned to irrigate 200,000 acres of land in Coke and Rannels Counties.

"The average annual run off of the Colorado River for the past five years, including the three driest years west Texas has ever known, is 350,000 acre feet.

"The Colorado River above the proposed dam drains thirteen west Texas counties, having a total of 8000 sq. miles.

"This project was originally promoted by the Young Mens Business League of Ballinger and the Chamber of Commerce of Bronte, the Colorado Valley Irrigation Association being later organized to take over the work.

"It is planned to create an irrigation district under the Tillotson Act after which there will be a bond election to vote sufficient funds to finance the scheme. It is estimated that the cost of the project will be about \$3,500,000.

"The type of dam has not been decided upon, but very likely it will be an earth, rock filled dam with concrete core.

"Financing the survey has been taken care of by appropriations from the U. S. Geological Service and from the State Board of Water Engineers, supplemented by several thousand dollars raised by the towns of Ballinger, Bronte, Miles and Rowena.

Westinghouse Company Establishes New Branch.

Charleston, W. Va., October 16.—[Special]—The Westinghouse Electric Manufacturing Company has completed arrangements for the establishment of a branch in this city so that this company may be in a better position to supply the needs of its patrons in West Virginia, Ohio, Kentucky and Tennessee. The West Virginia branch will be housed in a three-story brick and steel building to be erected here to be 100 feet square, a contract for the building having been awarded to the Hines-Bailey Corporation recently organized with a capital stock of \$200,000. H. E. Hines is president of the new corporation, T. F. Bailey vice-president, and E. C. Hines secretary and treasurer.

At the Huntington branch the electric company will establish a general office. They propose to cater especially to the needs of coal men in connection with the sale of mine locomotives, motors and other heavy electrical machinery. Even without a branch, the Westinghouse Company transacted a business of \$4,000,000 in West Virginia last year and expects through closer contact with the trade to increase their business after the new branch is established.

\$500,000 Hotel for Frederick, Md.

Frederick, Md., October 22.—[Special]—Contract has been awarded Jno. S. Hershey, Stephen Girard Bldg., Philadelphia, Pa., for the erection of a six story \$500,000 hotel here, after plans by Frederick Webber, 403 Morris Bldg., of the same city. It will have a steel frame, concrete and pitch roof, and a vacuum steam heating plant. Three elevators for freight and passengers will be installed. The Frederick Hotel Co., recently organized, are the owners.

New Steamship Line from New Orleans to Brazil.

New Orleans, La., October 15.—[Special]—The Cia de Navegacao Lloyd Brasileiro recently organized in Rio de Janeiro has installed steamship service between New Orleans and Brazil. Service for the present will be monthly, and the first trip has already been made.

\$500,000 Dairy Plant for New Orleans—\$1,500,000 in New Schools.

New Orleans, La., October 21.—[Special.]—A \$500,000 plant for the Cloverlands Dairy Company and \$1,500,000 in new schools are among the principal items in the building program of New Orleans for the near future.

The land on which the dairy will build its plant reflects the growing value in realty in New Orleans. This square of ground in Carrollton was purchased some time ago by the Ford Motor Company for \$45,000. It was sold to the Cloverlands people for \$52,000; and a few hours after the sale was announced, the Cloverlands people received an offer to sell at a profit equally as large.

The new plant, according to present plans, will be four and perhaps five stories high and will cover the entire square. It represents a remarkable expansion of this enterprise.

The building program announced by the school board calls for five new school houses, four of brick, three stories high and each containing 16 rooms. These new schools are made necessary by the increase in enrollment this year of 4,000 pupils.

Will Manufacture High Pressure Iron Pipe.

Birmingham, Ala., October 18.—[Special.]—Announcement is made that J. R. McWane, president of the American Cast Iron & Pipe Company, will head the McWane Iron Pipe Company, a new concern that will produce a patented joint and a high pressure two and three-inch cast iron pipe, a temporary plant having been leased in North Birmingham, to be developed later on. Mr. McWane will take up the duties of advisory director of the American Cast Iron Pipe Company, to be succeeded January 1 as president of the company by John J. Egan, now chairman of the board and former president. Mr. McWane will continue his position with the American Cast Iron Pipe Company. With president, John J. Egan, now in Atlanta, Paul A. Ivy, W. D. Moore and C. D. Barr will be vice-presidents. This company has been a decided success almost from its inception.

New Orleans Coal Tipple Loads First Coke for Export.

New Orleans, La., October 22.—[Special]—The Dock Board's coal tipple recently made its initial operation for commercial purposes with the loading of a cargo of pitch coke for export. Previously all pitch coke was shipped out of Atlanta ports but the Barrett Co., of Thomas, Ala., was induced to ship through New Orleans. It is expected that from now on large shipments of coal and coke will be handled by the tipple, which was erected at a cost of approximately \$1,000,000.

\$500,000 Hotel Planned for Miami.

Miami, Fla., October 22.—[Special.]—J. K. Leaming of Indianapolis, Ind., plans the erection of the Leamington Hotel here at a cost of approximately \$500,000. It will contain 100 rooms and be five stories high with a basement, the lower floor to be used for stores to be rents to merchants. W. T. Regard and T. O. O'Neal are interested in the incorporation of a company.

Will Erect \$150,000 Building in Danville.

Danville, Va., October 22.—[Special]—The Southern Amusement Co. will receive bids early in November for the erection of a theatre, store and office building here to cost approximately \$150,000. It will be of frame and brick construction, 59 by 187 feet. C. K. Howell, 35 Poplar Street, is the architect. J. C. Hester, Box 864, Danville, will receive proposals for erection of the structure.

Revolution in Transportation on the Mississippi River.

THE MISSISSIPPI BARGE LINE, AN INLAND WATERWAYS SUCCESS—SOME DEAD STATISTICS—FIGURES DO NOT LIE; BUT LIARS FIGURE.

By CLARK McADAMS, St. Louis.

In five months of this year, from April to October, the Government barge line on the Lower Mississippi river earned \$257,000 more than its operating expenses. It has the distinction of being the only business enterprise in which the Government engaged during the war that made money. In 1852, when the Mississippi was at the height of its golden age, 3,149 steamboats docked at St. Louis. Their average carrying capacity was 26 tons. The Government barge line, moving fleets of 10,000 tons capacity each, has handled more freight in and out of St. Louis on the river this year than was handled by all the 3,149 steamboats of 1852. Of grain alone more than a million bushels went down the river for export in August. Had the barges and towboats been available, there might have been a sailing every day for the sixty days through which the grain movement was at its greatest volume. Wheat is worth three cents a bushel more to farmers in the middle Mississippi valley by reason of the barge line saving in transport to Liverpool.

There has been some debate as to who lost the late war, but to the people in the Mississippi Valley it was clearly a defeat for statistics. Except for the war, statistics had always been able to establish the impracticability of reviving traffic upon these rivers. For fifty years their reign was absolute. Congress believed in them. In contemplation of them private capital was terrified. Before this mighty enemy of the inland waterways the business men of Chicago, the Twin Cities, St. Louis, Pittsburgh, Cincinnati, Louisville, Memphis and New Orleans, all needing the rivers, capitulated without firing a shot.

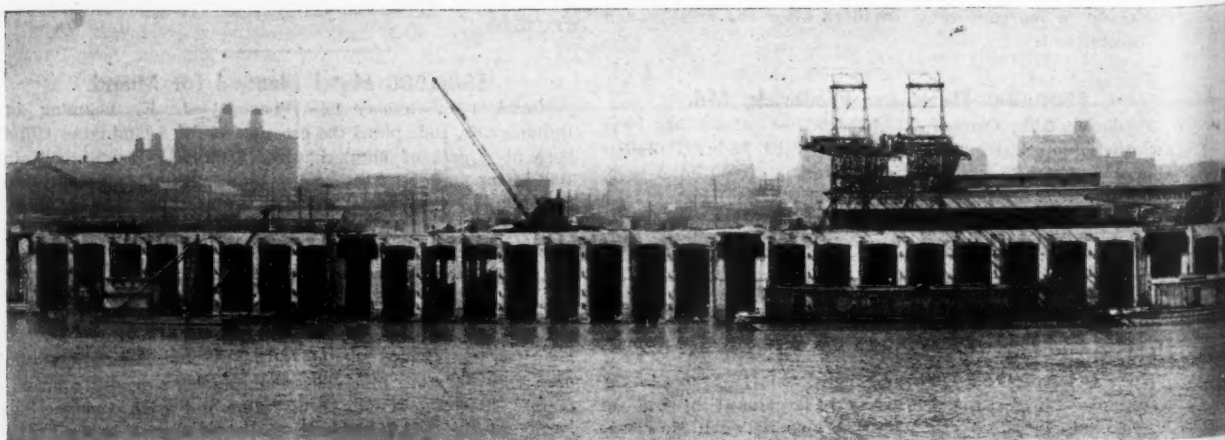
It took a world war to kill statistics, but thank heaven they are dead. Out of their long range of terror emerges the government barge line on the Lower Mississippi river, which is actually making money. This belies statistics. It is against everything that everybody has been led to believe. When the Government barge line began operating as an aid to railroad congestion during the war it encountered widespread disbelief. People somehow thought that what the Government was trying to do was to revive old times upon the Mississippi. They thought of river traffic in terms of picturesque paddle-wheel boats peopled by singing darkies, hand-tailored pilots and immaculate gamblers in shining silk hats. They associated it in their minds with the celebrated race between the

Natchez and the Robert E. Lee. Those memories of the river were much too definite to give way to a conception of twin-screw towboats, steel barges and docks equipped with mechanical carriers and gantries. No such things had ever been seen upon the river, and thanks to Mark Twain the old picture prevailed. When anybody wrote about reviving river traffic the editors, who knew this picture well, illustrated the story picturesquely with these old steamboats surmounted by quaint ringed stacks and good group drawings of musical roustabouts.

This powerful tradition the Government barge line had to combat. It had also to combat a current of four miles an hour over 1150 miles of river between New Orleans and St. Louis. It had to build its equipment. Fortunately, statistics had gone away to the war never to return. Except for that, the service on the Lower Mississippi would have been short-lived. As things turned out, it had time to prove itself. It had time to build up a rate structure covering the watershed of the Mississippi and its tributaries. It had time to begin the construction of modern dock facilities. It lost money; but it was gaining, and when the war was over and statistics did not come home the Mississippi Valley awoke to a realization that the thing could be done.

The Government barge line enjoys a differential of twenty per cent under railroad rates. It has joint rail and water rates to and from points remote from the river. A transportation line is like a tree. It cannot stand without far-reaching roots. No prior attempt to revive traffic upon the Mississippi has enjoyed this facility. That is the chief reason why all such attempts have failed. Another reason was that the railroads were permitted to make rates upon lines paralleling the river which drove the steamboats out. The Esch-Cummins law gives the Interstate Commerce Commission power to forbid this. Thus for the first time in fifty years river transportation is related to rail transportation upon a lower cost basis.

This is the secret of the excess above operating expenses made this year by the Government barge line operating between St. Louis and New Orleans. It explains the expectation that what is true of the Lower Mississippi is soon to be true of the Upper Mississippi, the Missouri, the Ohio and the Illinois rivers. Water transportation is cheaper than rail



THE MILLION DOLLAR DOCK BUILT BY THE CITY OF ST. LOUIS

transportation. The Mississippi barge line saved shippers from April to October, \$175,000. It is economic necessity, wanting which all the cities in the Mississippi Valley have suffered in competition with the cities which have cheaper transportation of bulk freights by water. That is why the Mississippi Valley wants to use its inland waterways. It has had its lesson, and the war has given it an opportunity to prove its case. The Government barge line on the Lower Mississippi went over the top in April of this year, when it made an operating profit of \$50,000 with only one of its modern 1800-horsepower towboats in commission. Since then it has steadily made money. Four of the towboats are in commission, and the remaining two will be delivered this Fall. The total river tonnage at St. Louis in 1852 was 844,951. The capacity of the new barge line fleet this Fall will be 1,500,000 tons.

Shippers in the Mississippi Valley have been watching the Government experiment with growing appreciation of what it means. They no longer doubt its benefits to them. They are discovering that it removes the disadvantage which they are under in competition with coast cities. St. Louis and Chicago can compete with the Eastern seaboard for trade on the Pacific coast when they can ship by water; they cannot do it when the seaboard is shipping by water and these inland cities are shipping by rail. Most of the freight going down stream from St. Louis comes from points north of St. Louis, just as most of that coming up stream goes to points beyond St. Louis. Chicago is the heaviest patron of the barge line. The shipper saves money, and when he saves money he is not hard to find. When the Government was induced to establish this service the representation was made that freights upstream would not be less than 60 per cent of those downstream. Experience has shown them about equal. Grain is the largest item of southbound freight; molasses, oil, sugar and sisal are the principal freights northbound. There are two sailings a week out of St. Louis and New Orleans. As confidence in the regularity of these grows the volume of freight increases.

This has been a revelation to the valley, where statistics had left the rivers unused; where industry and commerce had long fought an unequal fight, and where cities which had been made by the rivers had seen themselves outstripped by cities on used water. This is why we want to use the inland waterways. It is why Illinois is spending \$30,000,000 to connect the Illinois and Chicoga rivers. It is why St. Louis is building modern docks equipped with freight-handling machinery. It is why New Orleans, once the second American port, is building facilities with which to retrieve her former place. It is why the Mississippi Valley Association has been organized to fight the battles of the valley in

Congress. It is why everybody from Pittsburgh to Denver, and from the Twin Cities to New Orleans is glad that statistics are dead.

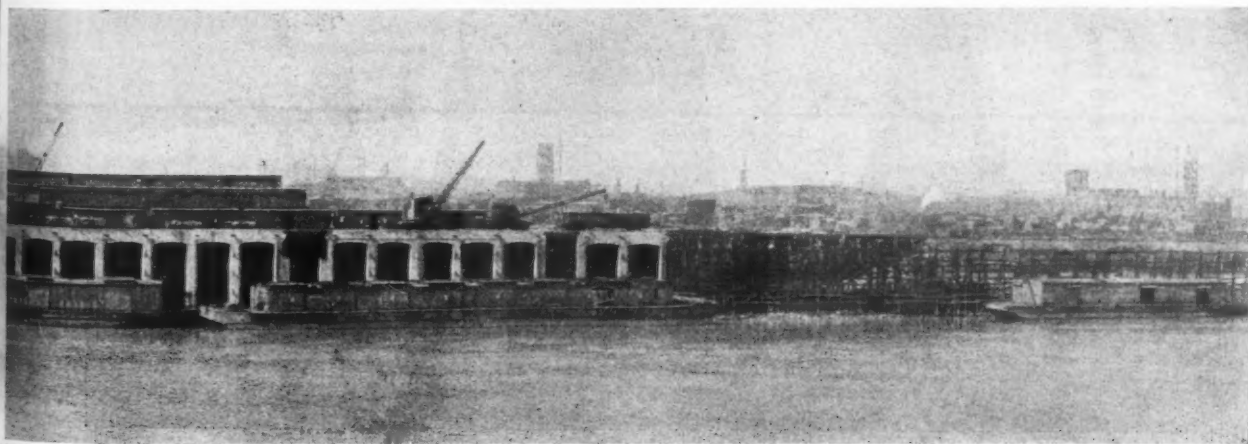
Nobody in the Mississippi Valley believes that the Government is going to continue this operation. It is only proving that the thing can be done. When that is proved the Government will doubtless dispose of its fleet to private interests, which will extend the service to the Upper Mississippi, the Ohio, the Missouri and the Illinois. There was a foundation to be laid, and only the Government could lay this foundation. Private interests could not establish the rate structure which the river enjoys. They could not compel



MEMPHIS RIVER AND RAIL TERMINAL SHOWING TRUCK HAUL INCLINE.

the railroads to grant joint rail and river rates. The Government could do these things, and it has done them. It has opened the way to private investment, to the construction of boats and barges and to the operation of fleets upon all these great inland waterways.

Statistics made a plain case against all this. They postulated the innumerable failures of private enterprise to revive river traffic at a time when there was no rate structure to feed the river, no relation of river traffic to rail traffic and no way in which to keep the railroads from making cut-throat rates destructive to boat lines. They advanced the fallacy that there is not enough depth in the rivers for the operation of boats, and they intimidated the valley with warnings of ice and fogs. Even storms were conjured up before the Inland Waterways Commission as a reason for disallowing the petitions of the valley to put the rivers to work dur-



ANTICIPATION OF A REVIVAL OF TRAFFIC ON THE MISSISSIPPI RIVER

ing the war. Then statistics went to the war themselves, and in the war were slain.

No indemnities are being asked by the people who live in the Mississippi Valley. When a bugaboo falls there is only relief and gladness, and the usual dickering over damages is happily avoided. The damage statistics did along the Mississippi and its tributaries is incalculable. Not even statistics themselves could do it justice. It was not merely that boats had virtually disappeared from these streams, but that their disappearance had come to be accepted as proof



SELF PROPELLED BARGE BIRMINGHAM

First of the new units for service in the Warrior River district. The center open section has a capacity of 2000 tons and was designed to transport bulk freight such as coal, iron, steel, ore, etc. At either end of the barge steel cargo houses are provided to accommodate 750 tons of high class merchandise.

that the usefulness of the rivers had ended. Twenty-five years ago there were many barges and boats still in use on the Mississippi, but the business was then stricken. The railroads were everywhere meeting water rates regardless of the cost of rail service, and public belief that the railroads could be expanded to meet any emergency encouraged the railroads to fight for the business of the barges and boats. No one felt any particular anxiety about the future of these rivers. The railroad men laughed at the wheezing old boats and their choral crews. They said they could give a better service for less money, and as they proceeded to haul the freight at barge rates no shipper was concerned to find out whether the railroads lost or gained by it.

The waterways were gradually abandoned, and the railroads tried to keep up with the growth of the country and provide for the great increase in traffic which came to them year by year. It was hard. It seemed to some of the great railroad men to be impossible, and these few singularly tried to use the waterways to help out. Ten years ago the late James J. Hill said the railroads had reached the limit in their economies and seriously discussed making the standard gauge of the railways six feet. He made some startling figures of the capital the railroads must expend from year to year to keep abreast of the traffic. People did not believe him then. Statistics held the field. They even went to the length of trying to prove at one time that the Soo Canals were an economic loss, but no transportation expert carries prominently in his library now the book in which that fearful equation was worked out.

It was hard for the railroads to keep their rates low where there was a waterway capable of use and make them high where there was none. But they had to do this to make revenue enough to exist. It was clear to those who knew the facts that the interior must pay high rates if the railroads were to carry freight between river communities at the rates at which the barges would take it. So they charged high for short hauls and low for long hauls between the cities which were on the waterways. This was troublesome, for it was against the law. The interior communities were angered, and they invoked the law. There was something in the law about "similar circumstances and conditions." The railroad men convinced the courts that the presence of a navigable stream set up a condition of competition which was not similar and gave them the right to charge as low as the cost on the rivers. But the interior of the country is the biggest part of it, after all. The people there disagreed with the courts. They had the law changed so the railroad men could not any longer act as judges of what circumstances justified them in charging high rates where there was no waterway and low rates where there was. They changed the law so as to make the Interstate Commerce Commission the judge. Then the railroads were told by the Commission to show it all the places where their rates violated the law. The railroads brought nearly all their tariffs to the Commis-



ONE OF THE TEMPORARY TOWBOATS LEAVING NEW ORLEANS WITH A SMALL UPSTREAM TOW. AT RIGHT—A NEW ORLEANS HARBOR UNLOADER WITH PORTABLE JACK-KNIFE CRANE.

sion, and the thing was so huge that after ten years it is not yet nearly straightened out.

The Commission had of course to try and fix up the mess so the people of the interior and those living on waterways would all be satisfied, and it seemed to feel that it could not do anything which would cause any of the railroads to carry less freight. It is true that Congress had not in a long time passed any laws which made the Commission feel that the country was interested in seeing that boats and barges on the rivers had an opportunity to live and grow. At any rate, the Commission said it could not regulate the water rates. The boats had cut their own throats, and anyway it was none of the Commission's business. It had enough work to keep the railroads straight.

"But you can't haul freight at the low rates you are making to these river towns," the Commission said to the railroads. "You must be charging very high rates between these interior points—higher than the service warrants."

"We know it; but if we raise our low rates the boats will take the business, and then we will have to charge higher rates between the interior points to make up the same amount of revenue," said the railroads.

"But there are no boats to carry the business; they are all gone," the Commission protested.

"True," answered the railroads; "but they used to run ten years ago and make these rates. The rivers are still there. If we raise these rates the boats will come back, and we don't want them to come back."

"How very perplexing," said the Commission. "What is to be done about it?"

Thus appealed to, the railroads bestirred themselves in their own behalf. They invoked statistics—the cold, the unassailable. They evolved a theory. It had the form of logic, and it was logical. It defied argument. Only time and the war could prove how vulnerable it was. They said:

"We have plenty of railroads to handle all the business.

"We can run more engines and cars over our roads than the business now requires. (Mind, they never said there were plenty of engines and cars. That was left to inference.)

"Whether we handle much or little, the railroad is built. It has got to pay interest and other carrying charges, and we have to keep it in good repair or we cannot safely handle passengers.

"The rates at which the boats and barges handled freight on the rivers will not pay all these costs; but we believe they will pay the cost of running the trains, with a little left to keep up the tracks.

"If we do not carry the freight at the barge line rates we will not have this little more to keep up the tracks. We will have to get it by raising rates in the interior, which you say are already too high.

"So no matter how low we have to go to take this business from the barges, if it pays the out-of-pocket cost we should be permitted to make the rates and not compare them with



LOADING BULK GRAIN AT ST. LOUIS DIRECT FROM ELEVATOR TO BARGE

rates we must make in the interior to maintain our equipment and pay our interest and overhead. There can be no fixed relation between the two transactions."

Statistics won. That was nearly ten years ago. War found this rule of reason still the main tenet of our system of railroad rates. This picture covers the storm center of railroad rate history over a period of thirty years. During all this time there was continued what seemed a hopeless fight to revive water transportation. It was led by those who knew the economies of such service when properly equipped. The best these efforts secured was a halting policy of channel improvement on some important rivers which finally got itself styled "pork." This euphemism was coined by the railroads, who also adroitly coupled up reasonable expenditures for channel improvements promising a return with postoffice buildings in isolated communities where there was no gain to be derived beyond the gratification of local pride. However, in this period a good 9-foot channel between St. Louis and New Orleans on the Lower Mississippi was dredged and well protected and marked.

Then the war came, and the railroads broke down. They proved that they were not equipped even for normal business. To save them from bankruptcy and utter collapse the Government took them over and began their unified opera-



TWIN SCREW TUNNEL TOWBOAT NATCHEZ, 1800 HORSEPOWER, ON WAY FROM NEW ORLEANS TO ST. LOUIS, WITH FIVE BARGES OF 2000 TONS CAPACITY EACH.

tion. In rapid succession two horizontal increases in freight rates were made—first fifteen per cent and after the commencement of federal control another twenty-five per cent on top of that. Beyond this, it was apparent that the railroad plant was not nearly large enough to handle the nation's business. It was equally true that it could not be quickly expanded. Those who had framed the logic of past railroad policy found their logic suddenly overthrown by facts. There probably were railroads enough, but there the argument broke down. There were not enough engines and cars, not enough passing tracks, yards, round houses, coal and watering stations. Terminals were lacking, and the yards were



GANTRY CRANE AT MUNICIPAL DOCK, FOOT OF NORTH MARKET STREET, ST. LOUIS

not big enough to classify the trains. There was not enough of any single thing except main lines, and traffic was unevenly distributed over those.

It was then that the Mississippi river, which DeSoto had thought to have discovered forever, was rediscovered. The railroads had broken down. But the river was still there, and thanks to the people who had remained undismayed by the cries of "Pork" the channel was in better condition than when the river was abandoned twenty-five years before. Some \$8,000,000 was expended for equipment to put the Mississippi river in use between St. Louis and New Orleans. There was the usual criticism of expending public money in a field where private capital should be left to function, but at a time when the Government was expending a billion and a half dollars upon the plants of the railroads nobody paid much attention to it. The barge line on the Lower Mississippi, operating through the first years with inadequate equipment lost money; but the railroads in the same years lost \$600,000,000. The barge line in its first year, with a small temporary fleet, supplied 75,000,000 ton miles of transportation service. When its fleet is complete it will furnish 1,000,000,000 ton miles of service annually. That fleet will be complete within the current year. It needs another \$5,000,000 worth of boats and barges to handle its fast

growing business. A second Government fleet to operate under private lease on the Upper Mississippi river, will be completed by winter. A third Government fleet under Government operation is carrying coal down the Black Warrior river to shipside at New Orleans. The cost of carrying freight on the Lower Mississippi is from 3.8 to 4 mills per ton mile. Upon an equal valuation the cost of carrying freight upon the western railroads is from 11 1-2 to 13 mills per ton mile.

All this has resulted from the death of statistics, which fell in the war. Singularly, there is no lack of freight at the river docks. This, too, at a time when freight upon the railroads is slack. The cost of transportation has become more important than it was, and carrying freight by water is proving cheaper than carrying freight on land. This has emboldened shippers to use the Government barges. Contrary to all they have been taught to believe, they have still found it a fact. The Government, too, is going ahead upon the assumption that Congress is going to accept this fact. It is building and equipping docks on the Mississippi where the river cities have been unwilling or unable to do this for themselves. The State of Louisiana continues to build docks at New Orleans. It is equipping them with mechanical carriers to handle freight between the ships and the barges. A correspondent who came to St. Louis was surprised to find that freight coming in for reshipment down the river was consigned to ports all over the world. This, too, was against statistics. He had not been taught to believe that this could be true. Nevertheless, it is true; and it is true as well that freight coming up the river comes from ports all over the world. He, too, had thought of the river revival in the terms of picturesque old boats, hand-tailored pilots and immaculate gamblers in shining silk hats. He had not thought of it as related to all other traffic, the world around, without gangs of roustabouts singing chanteys and a nigger on the safety-valve. The new towboat Natchez, which did not race with the Robert E. Lee, goes down to New Orleans with a tow in six days and brings another tow back to St. Louis in twelve. That, too, is against statistics.

But statistics are a dead cock in the pit in the Mississippi Valley. We will never believe in them again.

Record Volume of Farm Loans Made by New Orleans Federal Land Bank.

New Orleans, La., Oct. 14—[Special.]—The New Orleans Federal Land Bank is breaking all previous records on loans to farmers in Louisiana, Mississippi and Alabama. The business of September raised the monthly average for the year from \$1,250,000 to \$1,500,000. Between October 1 and 4, \$240,000 was loaned to 117 farmers. On October 3, which was the banner day in the bank's history, 81 loans were made totalling \$169,000.

Since the bank resumed operations in March, loans totalling \$3,300,000 have been made. Since the bank was organized, it has distributed \$29,146,455 to 17,275 farmers in the three states named.

The New Orleans bank holds the record for the greatest number of loans, and has the smallest average of loans to an individual. The average here is about \$1500.

By the middle of October, loans totalling \$98,700 will have been made. The papers have already been completed. It is expected that by that time the New Orleans bank's quota of the \$60,000,000 land bank bond issue now being floated will be available for distribution. About \$6,000,000 will come to New Orleans.

Improved conditions in the South, say the bank officials, are responsible for the decrease in the number of applications for loans, although the total volume of money loaned by the bank is increasing.

THE IRON AND STEEL SITUATION

Pittsburgh Market Dull But Firm.

Pittsburgh, Pa., October 22—[Special.]—Steel production has probably increased a trifle in the past week, but the market as a whole is somewhat dull now, and until there is further improvement in buying the rate of production will hardly increase. Measured by steel ingots the rate is now a trifle over 35 per cent of capacity. July was the low month of the year, with production at about 21 per cent. Thus there has been an increase of 67 per cent.

No fear need be entertained that there is any possibility of the steel industry reverting to the condition of extreme depression exhibited last July. On account of existence of stocks of steel and of manufactured wares that had to be liquidated the demand upon the mills was altogether subnormal. It was not in relation to the general volume of business the country was transacting. This is proved by a simple comparison. Production of steel ingots last July was only 28 per cent of the production in July, 1920, while the freight ton-mileage on the railroads was 70 per cent as great as it was a year previous, and debits at bank accounts were 82 per cent as great, the four weeks ended July 25, 1920, showing \$35,225,000,000 while the four weeks ended July 27, 1921, showed \$29,000,000,000. As prices, wages and salaries went down meanwhile the physical volume of business, as a whole, must have increased somewhat. The condition of steel last July cannot be repeated unless buyers accumulate unnecessary stocks again, and they show no disposition to do that.

The Bridge Builders' and Structural Society report fabricated steel lettings in September to have equaled 48 per cent of the fabricating capacity, against 33 per cent in August and an average of 28 per cent in the eight months ending with August. The increase accounts for the heavier operation the structural mills are now showing. There is also a slightly better operation of bar mills. Plate and rail mills are almost idle, as formerly. In the ascending scale are wire mills, pipe mills, tin plate mills and sheet mills, the last named showing easily the heaviest operation of all. The Steel Corporation's sheet mills are operating at about 90 per cent, while several independents are operating at 70 to 90 per cent. Tin plate mills are running at about 50 per cent, against about 60 per cent a fortnight ago, but even the present rate is double that of last July.

The general trend in finished steel prices is towards greater firmness. The condition in bars, shapes and plates remains that some mills will sell at about \$1.60, while the Carnegie Steel Company and several independents are holding strictly to \$1.65 for bars and \$1.75 for shapes and plates. It has been expected that the lower prices would disappear, but that has not occurred up to date. In sheets most of the independents have formally announced an advance of \$5 a ton, but purchases can still be made at the old prices, resulting from the \$5 a ton advance in September, and indeed the blue annealed sheet market has slipped back to the old price of \$2.25.

The steel industry has not been worrying over the threat of there being a general railroad strike, feeling that a strike would do the industry no great harm. Conditions are different from those in April, 1920, when the industry suffered severely from the railroad strikes. The steel industry is mainly interested in the strike matter from the viewpoint of the test it furnishes of the labor provisions in the Transportation Act.

The pig iron market has been quiet, with quotations unchanged: Bessemer, \$20; basic, \$19.25 to \$20; foundry, \$21, f. o. b. valley furnaces, freight to Pittsburgh being \$1.50.

Connellsville coke is weaker in tone, spot furnace being

quotable at \$3.25 to \$3.50 against \$3.35 to \$3.50 a week ago, contract being unchanged at \$3.40 to \$3.50 for good brands. Spot foundry is \$4.25 to \$4.75 as for weeks past, but buyers have a wider selection of brands now at the \$4.25 price.

Sales at Birmingham Reach Good Total.

Birmingham, Ala., October 24—[Special.]—Large and small tonnages of pig iron sold during the present month aggregate well and many of the purchasers are accepting the product, piling it up themselves for future use. Quotations continue on a basis of \$19 per ton and there is no weakening though in the past week the sales have been in small lots and not as frequent as during the first two weeks of the month. Inquiries are still being received and small-lot sales made for delivery during November and December. Consumption in the Birmingham district continues remarkably well, inasmuch as cast iron pipe plants, sanitary pipe works, radiator and stove works are still enjoying good patronage, the cast iron pipe makers in particular, at this time of the year. Possibilities of a strike on the railroads have not brought about any extraordinary activity in the way of speeding up production and delivery.

Operations at steel mills of this district are on the same basis as for the past few weeks. Steel wire and wire products, rail and plate are enjoying a good demand.

Coal production in Alabama has taken on some improvement and aggregate tonnage of 230,000 tons per week is now reported. This shows an increase over the output of last month. Coke production has been speeded up considerably and there is a larger production again. The Woodward Iron Company has added to its by-product coke production. The Barrett Company has increased its number of bee-hive coke ovens on pitch coke, (Republic Iron & Steel Company's ovens at Thomas being used), and experiments are being made with the coke at foundries, wheel works and other plants. Plenty of pitch is said to be on hand or in the making to continue the coke manufacture, something new in this district, and regular coke manufacturers are watching this progress. Heretofore the pitch was shipped abroad where it was employed in coal briquetting. Coke quotations remain strong, foundry coke at \$6 with the pitch coke at \$5.50, furnace coke at \$5. All by-product coke oven plants of the district are increasing output and bee-hive coke will be increased shortly when another of the independent companies fires up a number of ovens, according to schedule.

Iron and steel scrap dealers continue to express confidence in the improving condition of the market. There is a better demand for their product.

Five blast furnaces were placed in operation during the present month. Probabilities are that two or three more will be started up next month if the railroad strike and other interruptions do not disturb the steadily improving conditions of the country. Inquiries being received from the north, northwest and east promise to develop into trade and furnace interests here appear in a better frame of mind.

Quotations follow:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$19.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$19.50; iron of 2.75 to 3.25 per cent silicon, \$20.00; iron of 3.25 to 3.75 per cent silicon, \$20.50; iron of 3.75 to 4.25 per cent silicon, \$21.00; charcoal iron, f. o. b. furnaces, \$35.00.

OLD MATERIAL.

Old steel axles	\$17.00 to \$18.00
Old iron axles	20.00 to 22.00
Old steel rails	12.00 to 14.00
Heavy melting steel	11.00 to 14.00
No. 1 R. R. wrought	12.50 to 14.00
No. 1 cast	17.00 to 18.00
Stove plate	12.50 to 14.00
Old car wheels	14.00 to 15.00
Old tramcar wheels	13.00 to 13.50
Machine shop turnings	4.00 to 5.00
Cast iron borings	4.00 to 5.00

RAILROADS

\$9,400,000 Spent for Improvements.

J. L. Lancaster, of Dallas, Tex., and C. L. Wallace, of New Orleans, La., receivers of the Texas & Pacific Railway, have practically completed the rehabilitation of the line, and since the beginning of 1920 have expended \$9,400,000. for improvements, betterments and new equipment, all of this being done out of earnings, according to a statement made at New Orleans. The work included laying 85 pound steel rails, replacing lighter rails, for 250 miles of line and the putting of 1,200,000, new cross ties in the tracks. There were also 400,000 cubic yards of ballast bought and put on the line. Steel and concrete bridges have replaced seventy bridges of wood and at Melville and Plaquemine, La., draw bridges have been made stronger. Five new water stations have also been erected. Locomotives, having been converted from coal burners to oil burners, storage tanks for 1,000,000 barrels of oil were built. At Marshall, Tex., the company's shops have been rebuilt following a fire and the plant is now capable of any work that may be desired. Telephone dispatching circuits have been installed on the Natchitoches branch, which has been rebuilt.

New equipment bought by the receivers includes 30 freight locomotives of the Santa Fe type, 14 Pacific type passenger locomotives, 14 six wheeled switching locomotives, 11 light Mikado type freight locomotives, 50 steel passenger cars, 10 steel dining cars, 12 steel baggage and express cars, 2 steel baggage and mail cars, 160 tank cars and 300 steel Rodgers ballast cars, and a weed burner, the latter to destroy rank vegetation that in summer time becomes at places very objectionable. The improvements are said to have resulted in a reduction of four hours in running time of passenger trains between New Orleans and Dallas.

New Equipment Purchased.

Chicago, Rock Island & Pacific Railway has ordered 14 heavy Mikado type locomotives from the American Locomotive Co.

Mississippi Central Railroad has ordered 2 Mikado type locomotives from the same builders.

J. J. Newman Lumber Co., Hattiesburg, Miss., is also reported to have ordered a Mikado type locomotive from the American Locomotive Co.

Baltimore & Ohio Railroad has ordered 2 dining cars from the Pullman Company.

Chesapeake & Ohio Railway will repair from 1500 to 2000 steel coal cars and from 500 to 1000 composite gondola cars.

Hutchinson Lumber Co., Huntington, W. Va., has ordered an 80 ton Shay type locomotive from the Lima Locomotive Works.

Kansas, Oklahoma & Gulf Railroad has asked the Interstate Commerce Commission for a loan of \$800,000. to purchase new coal cars.

J. B. Fletcher & Co., Fort Worth, Tex., are reported in the market for 100 tank cars of from 10,000 to 12,000 gallons capacity.

Debilitated Railroad Sold.

The Liberty-White Railroad, 24 miles long from McComb to Liberty, Miss., has been sold by the receiver, K. G. Price, to Hugh L. White, of Columbia, Miss., for \$30,000. The sale included not only the line but rolling stock, station buildings, warehouses, etc. A description of the equipment says that there are "two locomotives, neither of which will run; one freight car and two passenger cars in bad condition. In addition to its bonded indebtedness, the road owes payrolls amounting to \$11,000 and there are many other outstanding claims against it." The bonded debt, according to Poor's Manual of Railroads is \$72,500.

A New Line in South Carolina.

The first bit of railroad construction to be undertaken in South Carolina for a long time will soon be started by the Greenleaf Johnson Lumber Co., of Baltimore, in Charleston and Berkeley counties. It will connect McClellanville with the Seaboard Air Line at Jamestown by a line about 20 miles long. The work will be done by company forces, the McClellanville & Santee Railroad Co. having been chartered for the purpose with \$50,000 capital stock. The route is through level country and there are no difficult features to be overcome; only small bridges will be required. Ira Johnson is president and J. C. Johnson secretary and treasurer, both of Baltimore. R. M. Lofton of McClellanville, S. C., is vice-president. A tract of timberland will be developed.

Improvements to Interurban Railway.

The Piedmont & Northern Railway Co. which operates interurban electric roads between Charlotte and Gastonia, N. C., and also from Spartanburg to Greenville, Belton, Anderson and Greenwood, S. C., has spent much money for betterments this year including the rebuilding of the trolley line from Belton to Anderson, 12 miles. A new portable substation was installed at Donalds and a large capacity substation was built at Greers. Other work included the replacing of trolley poles along the routes and renewals of cross ties. It is estimated that by the end of the year 2,000 trolley poles and 80,000 cross ties will have been replaced with new ones. The cost of this work is about \$125,000.

Lower Water Rates to Gulf Ports.

Charles Bland, traffic manager of the Beaumont (Texas) Chamber of Commerce says that reduced freight rates from New York to Beaumont via the Morgan and the Mallory steamship lines will take effect November 1. They average about 40 per cent less than the old rates and apply to dry goods, print paper, notions, canned goods, and other articles of daily consumption which are purchased heavily in New York markets. These rates, it is further stated, will also apply to merchandise shipments from eastern seaboard points other than New York and also to gulf ports other than Beaumont.

Foreclosure Action Impending.

A press dispatch from Savannah says that the Farmers Loan & Trust Co., of New York, trustee for the first mortgage bondholders of the Savannah & Atlanta Railroad has obtained an order from the Federal Court at Savannah to permit institution of foreclosure proceedings against the property which is now in receivership. There are \$865,000 of these bonds which are first mortgage 5 per cents issued by the Brinson Railway Co., which was the name of the former company. Interest was defaulted May 1, 1921. The line is 145 miles long from Savannah northwesterly to Camak, Ga., connecting with the Georgia Railroad there.

Line will Continue Operation.

The trustee's sale of the property of the Grafton Power & Electric Light Company, Grafton, W. Va., resulted in the purchase of the power plant for \$65,000 by N. M. Argabrite, vice-president of the Kentucky-West Virginia Power Co., while the street car line was bought by William Farris, trustee for the Citizens Bank of Charleston, W. Va. Operation of the line will be continued.

Sale Postponed for a Month.

A report from Pensacola, Fla., says that the sale of the Gulf, Florida & Alabama Railroad, which was to have taken place October 17, has been postponed for a month on account of an amended court decree which was necessary in the case to insure legality of foreclosure.

GOOD ROADS AND STREETS

Many Highway Contracts Awarded at Low Figures

Raleigh, N. C., October 17—[Special.]—At the district office of the North Carolina State Highway Commission in Wilmington, the following contracts were awarded recently, there being 112 individual bids on the eight projects advertised and the contract figures representing a low-water mark in unit prices for work in this state for the past several years:

Project No. 621, 3.3 miles hard surfacing in Robeson County west of Lumberton, to C. W. Lacy of Wilmington; reinforced concrete pavement and concrete pipe; estimated cost \$106,000.

Project No. 622, six small bridges and approaches between Robeson and Columbus County line on Wilmington-Charlotte Highway, to L. A. Chitwood of Columbia, S. C.; estimated amount \$75,800.

Project No. 517, 15 miles topsoil road in Columbus County between Whiteville and Lake Waccamaw, to J. A. Kreis of Knoxville, Tenn.; estimated amount \$33,000; separate contract for structures awarded to Cornell and Young of Macon, Ga., estimated cost \$54,317.

Project No. 541, several bridges and approaches in Pender County on the road between Wilmington and Clinton, to the C. G. Kershaw Contracting Co. of Birmingham, for grading, estimated amount \$30,500, and to Cornell and Young of Macon, Ga. for structures, estimated amount \$55,600.

Project No. 635, for 13 miles of topsoil road in Bladen County between Clarkton and the Robeson County line, to the J. F. Mulligan Construction Co. of North Wilkesboro, N. C. for grading, estimated amount \$45,900, and to the Powell Paving and Contracting Co. of Columbia, S. C. for structures, estimated amount \$31,300.

Project No. 596, steel bridge at Autryville on the Fayetteville-Wilmington highway, to the Roanoke Iron and Bridge Works of Roanoke, Va., estimated cost \$23,930.

Project No. 624, bridge at Linden on the Raleigh-Fayetteville highway, to Porter & Boyd of Charlotte, estimated cost \$15,000.

A. W. McClay of Richmond, Va., was the low bidder on Project No. 518 for 15 miles of topsoil road in Pender County on the Wilmington-Newbern highway; estimated cost \$65,360.

In this month and November there will be let over \$3,000,000 worth of work on roads in this state. On October 20 bids for four projects in the eastern part of the state, one of which is for 4.5 miles of hard surface between Weldon and Roanoke Rapids will be opened at Raleigh. On October 27, bids for five hard surface projects in the second district totaling about 43 miles will be opened. These projects are in Wayne County, from Goldsboro to the Lenoir County line, in Pamlico County, from Bayboro to the Craven County line; in Greene County, from Snow Hill to the Lenoir County line; in Craven County south of Newbern and in Jones County from Trenton to the Craven County line via Pollocks-ville.

On November 8 bids will be opened for about 40 miles of hard surface work in Wake, Durham and Orange counties. On November 18 for about the same amount in Guilford, Alamance, Davidson and Rockingham counties and on the 25th for about 35 miles of hard surface work in Mecklenburg, Catawba, Gaston and Iredell counties.

All bids will hereafter be opened at the new offices of the Highway Commission in Raleigh instead of at the various district offices as heretofore.

\$850,000 Contract Let for 99 Miles of Highway.

The Womack Construction Co. of Houston, Tex., has been awarded a contract at approximately \$850,000 for the construction of 99 miles of the Bankhead National Highway in

four counties as follows: Howard County, 34 miles, costing \$275,000; Martin County, 13 miles, costing \$105,500; Midland County, 27 miles, costing \$226,300; Ector County, 25 miles, costing \$230,000. The surfacing will be of gravel and is expected to be completed within 18 months.

Great Progress in Highway Construction in Georgia.

Atlanta, Ga., October 21, 1921.

Editor Manufacturers Record:

I have been over many miles of the State System of roads and those who have traveled these roads in the past and since their improvement will agree that the progress in road building in Georgia during the past two years has been wonderful in spite of high prices and many adverse conditions.

Several counties have made preparation for co-operation upon a greater scale by the issue of county bonds and other County Commissioners are now seriously considering the submission of bond issues to their people.

There is already some discussion, also, of a State bond issue, which is likely to be voted during the next few years, perhaps within the next two or three years; and there seems to be a growing sentiment in Congress in favor of larger financial aid in the highway program. State Highway bonds have already been voted in ten states, among them being Illinois, \$60,000,000, Michigan and Pennsylvania each \$50,000,000, California, \$40,000,000, Minnesota, \$75,000,000, Missouri, \$60,000,000 and West Virginia, \$50,000,000.

It will be noted that most, if not all of these states, already had many millions of bonded indebtedness, many times larger than Georgia's debt, and some, at least, already had better road systems than Georgia has.

The amount of bonds which Georgia should issue is also under discussion by some of the County Commissioners.

It has been pointed out that the present automobile tag fund will pay the principal and interest on about \$32,000,000 of state highway bonds without levying any general tax and some seem to favor an issue of that size. They point out that the counties may then devote all of their local funds to improvement of connecting roads, leaving the state funds to the 5,500 miles of the state system.

I have heard others suggest an issue of \$75,000,000 and that \$7,500,000 of bonds be sold annually for ten years, thus saving the interest on the issue until the money is needed and the bonds sold, paying the interest out of the tag fund and providing a sinking fund for the retirement of the principal out of the same fund, as far as it will go, devising some plan for raising the small additional amount that may be required to pay the bonds in 30 years.

Should Governor Hardwick's plan for supplanting our present tax system with an income tax be adopted, as I believe it will be, it may be that the gasoline tax can be used for payment of road bonds also, which may solve the problem of paying the principal and interest of a \$75,000,000 bond issue and also the overhead expense of the State Department.

It may be regarded as reasonably certain that practically all of the states will issue highway bonds within the next five years, and, if they do, combining their funds with Federal aid in all the states, within ten years there will be a magnificent system of highways throughout the country.

Georgia cannot be left out of this great highway program and I have no doubt whatever that the General Assembly will soon give this matter earnest and thoughtful consideration.

G. H. HOWARD,
Attorney, State Highway Commission.

LUMBER AND BUILDING MATERIALS

Southern Pine Lumber Sales Retain High Level.

New Orleans, La., October 22—[Special.]—Sales averaging 699,796 feet per mill are reported by 135 lumber mills of the Southern Pine Association for the week ended Friday, October 14. The orders for the week totalled 4,400 cars containing 94,472,400 feet. Shipments amounted to 86,764,311 feet, while the production was only 70,838,619 feet.

Production was 22.20 per cent below normal, and orders were 33.36 per cent above production with shipments 22.49 per cent above production. Orders were 3.75 per cent above the normal production, while shipments were 4.71 per cent below normal production. The increase in "orders on hand" during the week amounted to 2.84 per cent.

The report for the week is as follows:—

	Cars	Feet
Orders on hand beginning of week.....	12,624	271,049,904
Orders received during week.....	4,400	94,472,400
Total	17,024	365,522,304
Shipments during week.....	4,041	86,764,311
Orders on hand end of week.....	12,983	278,757,993

A Reduction in Rates on Lumber.

Mobile, Ala., October 15—[Special.]—The Mississippi Central Railroad which recently extended its freight service into Mobile through a trackage arrangement with the Gulf, Mobile and Northern Railroad, announces a reduction from 14 1-2 cents to 12 1-2 cents per hundred pounds on lumber to Mobile from points beyond Hattiesburg as far west as Brookhaven, Miss. The Mississippi Central uses the Gulf, Mobile and Northern tracks from Beaumont, Miss., to Mobile.

The Gulf, Mobile and Northern Railroad has asked the Southern Freight rate committee for permission to publish a rate of 52 1-2 cents per hundred pounds on cigar box lumber from Mobile to Saginaw, Mich. The present rate is \$1.29 per hundred pounds. It is stated that seventy per cent of the cigar box material made in the United States is manufactured in Mobile.

U. S. Lumber Cut Decreased in 1920; Western States Alone Show Increases.

Washington, D. C., October 24—[Special.]—The lumber cut of the United States in 1920 was 33,798,800,000 feet, which is 2.2 per cent less than in 1919, and 27 per cent less than the peak in 1907 says a bulletin of the U. S. Department of Agriculture. The average price of lumber at the mill increased to \$38.42 per thousand, which is a rise of 150 per cent since 1910. The aggregate value of the cut is \$1,299,000,000. These are the highest annual valuations ever recorded, but do not indicate present conditions. They merely reflect the extremely high peak in the post-war lumber prices which was passed in the first quarter of 1920. The bulletin continues:

"These are the principal statistics obtained by the Forest Service, of the Department, in its 1920 canvass of American sawmills. They are based upon reports from 15,978 active mills out of 23,243 estimated to have been in operation. Several thousand mills cutting less than 50,000 feet were not tabulated, though allowance was made for their cut. Comparisons with 1919 are published by permission of the Census Bureau.

"The tables show that the States which increased their cut are all in the Pacific Coast group and the Rocky Mountains. Washington is first, as usual. Oregon attains second place for the first time, displacing Louisiana from a position held for 15 years, while California takes rank among the first five, displacing another southern yellow pine State.

"In 1920 the Pacific and Rocky Mountain groups of States,

combined, produced 35.6 per cent of the cut. The eight States of the southern pine group produced 34 per cent, while all of the rest of the United States produced 30.4 per cent.

"The combined production of Douglas fir and western yellow pine, which in 1919 was less than 60 per cent of the amount of southern yellow pine cut, in 1920 became 83 per cent. This relative increase in the western species arises in parts from the decrease in southern pine production, which amounted to 15 per cent. The conditions reported by southern operators, arising directly or indirectly from the war, were so adverse that the southern pine may be expected to recover part of the lost ground during the next few years. But the indications of the statistics are that the supremacy in lumber production held by the southern pine States has passed the zenith and is moving to the West."

Shortage of Turpentine Reported—Rosin Production Above Average.

Mobile, Ala., October 18—[Special.]—A shortage of turpentine in this section is reported by local factors who state that there is no sound basis for expecting a large production next season. They state that producers have sold their output in order to get ready money and they are now unable to finance their business next season. It is predicted that the price will advance to 80 cents before April 1.

The production of rosin was above the average the past season the output being taken by strong factors who say there will be an advance in the price before next summer.

Early exhaustion of pine trees available for rosin and turpentine is forecast by those interested in the business. They base their prediction on the fact that in the last five or six years vast forests of pine trees have been destroyed by storms and the remaining timber has passed into the hands of lumber mill interests who bought all they could get during the war when prices were high.

Lumber Railroad and Town Being Built.

The Gulf Lumber & Power Co., Oldsmar, Fla., is building a railroad out of there in a northeasterly direction. It will be only 3½ miles long for the present, but it is of standard gauge and will be used in developing a tract of yellow pine timber. Several houses have already been erected at Allendale, 2 miles from Oldsmar, and a logging town will gradually be established there. Charles E. Ecker, treasurer of the Reolds Farm Co. and W. F. Allen, president of the Gulf Lumber & Power Co. are expected to be officers of the new line.

Strong Revival in Textile Industry.

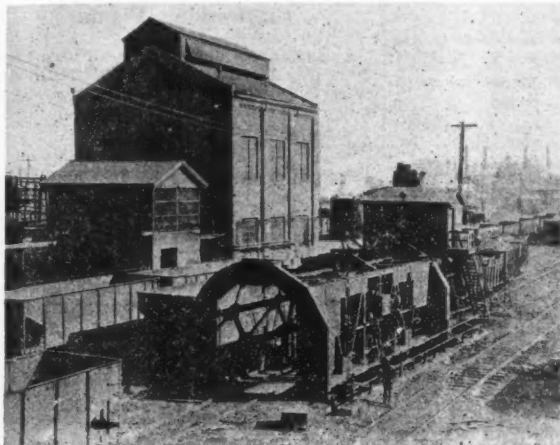
Gastonia, N. C., October 15—[Special.]—The strong revival in the textile industry is very pronounced in this county, which now boasts of 106 mills, the world's record for a like area, 95% of these are running, with good orders. With the exception of a strike at one local mill over the question of hours, there are no labor troubles in the county, as there is no labor union organized to date.

Mill stocks are selling once more, the public becoming interested again with the brighter prospects in the trade. Several companies have increased capital stock, and some have built additions to mills. Cotton yarns continue the chief interest in manufacturing, going to the eastern trade. The cotton crop in this section is fair, but of poor staple.

MECHANICAL

Car Dumper for Coal, Coke, etc.

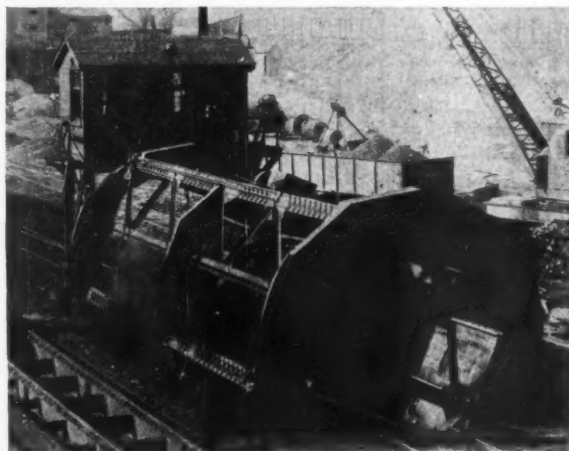
The Robins-Scherzer car dumper herewith illustrated is now in use at various coal and coke plants, where reductions in the cost of unloading bulk material became imperative because of the greatly increased expense for labor. It is described as a device of moderate cost and



DUMPER READY TO RECEIVE A CAR

small power requirements and it is also adapted to plants where moderate quantities of material are handled and a limited amount of power is available.

There are two sizes of this dumper, one handling cars up to 90 tons capacity and another handling cars up to 120 tons capacity and at a rate of from 20 to 30 cars an hour. The 90 ton dumper will handle cars varying from 8 feet to 10 feet 4 inches wide and from 6 feet to 11 feet 2 inches high above the top of the rail. It is so balanced



DUMPING A CARLOAD OF COAL INTO TRACK HOPPER when empty that its center of gravity coincides with its center of rotation and it revolves through an angle of 150 degrees.

The dumper consists of a steel framework 50 feet long and carrying a section of railroad track over the track hopper. The barrel is supported by circular girder and riding rings resting on wheels carried by equalizing castings mounted on steel supports that rest on the foun-

dation. Dumping is done by means of an operating rack secured to the middle girder and driven by spur gears and pinions from a 40 horsepower motor. When rolled on its side a car is supported by side holders and top holders so that it is firmly secured and it is handled gently.

The builders are the Robins Conveying Belt Company of New York and Chicago.

Votes \$550,000 Bond Issue for Roads.

A \$550,000 bond issue for the construction of modern highways has been authorized by Starke County, Florida, by a large majority. Of the total amount to be issued, \$300,000 will be expended for hard-surfacing probably with a top course of asphalt for a main public highway across the county, passing through Hampton and Starke. The balance of the funds, \$250,000, will be applied to the construction of lateral roads connecting the principal towns of the county.

Design Selected for \$1,000,000 Memorial Building to be Erected in Baltimore.

A design by Lawrence Hall Fowler has been selected for the War Memorial Building, of Baltimore. The structure will be erected on the Civic Center near the City Hall, at a cost of approximately \$1,000,000. The design is of Greek and Doric architecture, representing in general appearance a Greek temple with Doric columns, which will face the memorial plaza. The entire first floor will be devoted to an auditorium where public meetings may be held. Mr. Fowler is a Baltimore architect and his design was submitted in competition with a number of others.

Florida Building Program May Involve \$40,000,000.

Jacksonville, Fla., October 22.—[Special.]—New construction authorized in 12 of the principal cities of Florida during last month had a total valuation of approximately \$2,137,200, while the aggregate for the same cities for the first nine months of this year is \$19,971,700. It is estimated that the total throughout the state is over \$40,000,000 for this year to date.

Jacksonville, Miami, St. Petersburg and Tampa stand in the order named for permit valuation during September. Daytona, Daytona Beach and Seabreeze have high records, as have Orlando, Lakeland, West Palm Beach, Palm Beach, DeLand, St. Augustine, Palatka, and Gainesville.

Conditions Show Wonderful Improvement in Lower Mississippi Valley—Future Prospects Bright.

Memphis, Tenn., October 24.—[Special.]—The lower Mississippi Valley has had a remarkable come-back. It is now in a better condition actually and potentially than any other section of the country, says a survey just completed by the Southern Alluvial Land Association. There has been vast improvement in business and in general feeling of the people since July. Better prices for cotton helped, but conditions would probably have been good even without such prices because of the decision to grow feed and food crops at home.

Bankers in the immediate Lower Valley say the feed crops are wonderful and point to this as one of the great factors in the improved conditions. This year's accounts are being paid with remarkable promptness, some banks reporting obligations taken up before due. The survey quotes bankers at Itabena, Greenville, Tunica, Yazoo City, Cleveland, Lambert, Miss., and at Helena, and Earle, Ark., as decidedly enthusiastic over the good feeling now prevailing among merchants and other business men both on account of the liquidation of past obligations and because of the splendid prospects for the immediate future.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ark., Gurdon—Whelen Bridge Dist. will build 16x192-ft. bridge; cost \$27,000; bids opened Oct. 25; Parkes Engineering Co., Engr., Pine Bluff, Ark. Lately noted. (See Machinery Wanted—Bridge Construction.)

Ark., Little Rock — Commrs. Broadway—Main Street Bridge Dist., Moore & Turner Bldg., will construct superstructures of 2 reinforced concrete arch bridges across Arkansas river; all sub-structure work except for approaches has been completed; bids until Nov. 16; Justin Matthews, Secy. (See Machinery Wanted—Bridge Construction.)

Ark., Pine Bluff—Jefferson County Bridge Dist. will replace existing wooden trestle approach to Free bridge with steel approach; new structure, steel trestle 1400-ft. long including one span 120-ft. long with bents ranging from 18 to 24-ft.; concrete floors, 16-ft. wide; bids until Oct. 28; Parkes Engineering Co., Engr., Citizens Bank Bldg. (See Machinery Wanted—Bridge Construction.)

Fla., Fort Pierce—St. Lucie County will build bridge over Indian river; vote on \$35,000 bonds. Address County Commrs.

Ga., Dalton — Whitfield and Murray Counties will invite new bids on constructing county line bridge. Address Whitfield County Commrs., Dalton, Ga., or Murray County Commrs., Chatsworth, Ga.

La., Slidell—City let contract to Bonnabel Construction Co., Gulfport, Miss., to build 2 concrete bridges and gravel 2 mi. streets.

Md., Baltimore—State Roads Comsn., 601 Garrett Bldg., Baltimore, will build Severn river bridge connecting Annapolis boulevard with State Capitol; 1,827-ft. long with 22-ft. roadway; steel and concrete structure; cost about \$900,000; bids in November.

Miss., Carrollton—Carroll County Supvrs. let contract to F. L. Marshall for bridges over Colla Creek, Sharps Bayou, etc.

Mo., Boonville—City plans to build bridge across Missouri river. Address The Mayor.

Mo., Sedalia—State Highway Dept., Jefferson City, Mo., will build 20-ft. reinforced concrete slab span bridge, 2 reinforced concrete abutments on State road from Sedalia southward; Pettis County, State Aid Project 20.91; bids until Nov. 2; S. M. Rudner, Div. Engr.

N. C., Autryville—North Carolina State Highway Comsn., Dist. Office, Wilmington, N. C. let contract to Roanoke Iron & Bridge Works, Roanoke, Va., at \$23,930 for steel bridge on Fayetteville-Wilmington Highway.

N. C., Burgaw — North Carolina State Highway Comsn., Div. Office, Wilmington, N. C., will build bridges and approaches in Pender County on road between Wilmington and Clinton; grading to C. G. Kershaw Contracting Co., Birmingham, Ala., at \$30,500; structures to Cornell & Young, Macon Ga., cost \$54,317; Project 541.

N. C., Linden—North Carolina State Highway Comsn., Div. Office, Wilmington, N. C., let contract to Porter & Boyd, Charlotte, N. C., at \$15,000 for bridge on Raleigh-Fayetteville Highway.

N. C., Lumberton—North Carolina State Highway Comsn., Dist. Office, Wilmington, N. C., let contract to L. A. Chittwood, Columbia, S. C., at \$75,800 for 6 bridges and approaches between Robeson and Columbus County line on Wilmington-Charlotte Highway; Project 622.

Okla., Chandler — Lincoln County may build 5 bridges over Deep Fork Drainage Dist. Address Judge Hal Johnson.

S. C., Chester—Chester County will build 249-ft. reinforced concrete bridge over Fishing Creek on Chester-Rock Hill road; 72,808 sq. yds. bituminous paving; etc.; bids until Nov. 1. Address Board of Directors. (See Machinery Wanted—Bridge Construction.)

Tenn., Nashville — City, Felix Wilson, Mayor, will vote Nov. 17 on \$375,000 viaduct improvement bonds.

Tex., Bryan—Brazos County will vote Nov. 5 on \$100,000 bonds for repairing bridges; H. O. Ferguson, County Judge. (Supersedes recent item.)

Tex., Cameron—Milam County let contract to Austin Bros. Bridge Co., Dallas, Tex., at \$17,500 to build 70-ft. and 166-ft. span steel truss bridges; A. F. Mitchell, Engr., Cameron.

Tex., Galveston—Galveston County plans to construct concrete trestle bridge on Highway No. 2; cost \$27,000; C. C. Washington, County Engr.

Tex., Houston—City plans issuing \$100,000 bonds for bridge and street repairs. Address Mayor Holcombe.

Tex., Marshall — Harrison County let bridge contracts as follows: Cocke & Turner, Marshall for bridge work on Harleton road; Carr Construction Co., Shreveport, La., for bridge work on Elysian Fields road.

Tex., Marshall — Harrison and Panola Counties will build iron bridge across Sabine river between Marshall and Carthage; will let contract. Address Commrs. Court, Marshall, Tex., or Commrs. Court, Carthage, Tex.

Va., Stuart—Patrick County will build 75-ft. low steel truss and two 17-ft. steel beam spans over Dan river; 60-ft. low steel truss and two 21-ft. steel beam spans over Mayo river; bids opened Oct. 18. Address Board of Supvrs.

Canning and Packing Plants.

Tenn., Centerville—R. E. Shouse, Sam L. Whitson and R. H. Hatcher, acquired 2-acre

site; will expend \$2,000 to erect packing plant; capacity 800 hogs.

S. C., Sumter—R. A. Bradham interested in establishing cannery.

Clayworking Plants.

Ala., Gadsden—Bricks—Gadsden Clay Products Co., Mr. Hood, Mgr., is erecting down-draft kiln; plans constructing battery of 3 kilns; will erect plant additions; mfrs. pressed or face bricks.

Coal Mines and Coke Ovens.

Ala., Birmingham—Peerless Cahaba Coal Co., capital \$20,000, inceptd. with C. A. Noland, Prest.; G. W. Acton, Secy.-Treas.

Ky., Harlan County—Enrich Realty Co., Cleveland, O., purchased 2300 acres coal and timber lands; will develop.

Ky., Middlesboro—Yellow Hill Coal Mining Co., R. L. Smyth, Mgr., St. Paul, Va., will develop 310 acres coal lands, daily output 100 tons, N. H. Perkins, Const. Engr. (Lately noted increased capital to \$60,000.)

Tenn., Chattanooga—Hibbler, Barnes Co. increased capital from \$50,000 to \$100,000.

Va., Big Stone Gap—Black Creek Coal Co., capital \$10,000, inceptd. with R. Tate Irvine, Prest.; have leased coal lands, will develop.

Va., Lynchburg —Ingram Branch Coal Co. reorganized with A. S. White, Prest.; F. E. Turner, Jr., Secy.-Treas.; C. H. Meade, Supt.; will develop 3000 acres coal land, daily output 1000 tons.

Va., Roanoke—Virginia Iron, Coal & Coke Co., J. W. Cure, Secy., contemplate increasing capital to \$15,000,000.

Va., Tacoma—Heaton Coal Co., L. L. Heaton, Prest.-Mgr. (lately noted inceptd. capital \$50,000), will develop 165 acres coal land, daily output 500 tons; install mining mchy., motors, generator sets, pumps, electrical equipment; bids open. (See Machinery Wanted—Mining Machinery; Motors; Generator Sets; Electrical Equipment.)

W. Va., Huntington—Nagola Coal Co., capital \$200,000, inceptd. by G. R. Williams, Thomas E. Jeffries, Huntington; A. D. Cronin, Detroit, Mich.

W. Va., Fayette County—Oakland Coal Co., Jacobs Bldg., Fairmont, W. Va., capital \$1,000,000, inceptd. by J. V. Abbot, W. F. plant; purchased site. (Lately noted.)

Concrete and Cement Plants.

Md., Cumberland — Cement — Cumberland Cement & Supply Co. increased capital from \$10,000 to \$260,000.

Tex., Alice—J. U. Sheppard, Memphis, Tenn., secured 5-acre site will erect ginnery.

Tex., Waco—Portland Cement—Southwestern Portland Cement Co., O. J. Binford, Secy., El Paso, Tex., making preliminary survey, plans erecting \$3,000,000 cement plant; purchased site.

Cottonseed-Oil Mills.

W. Va., Huntington—Roger Mills Oil Co., inceptd. by H. D. Hatfield, W. E. Deegans and Jno. Faulkner.

Drainage Systems.

Fla., Daytona — Halifax Drainage Dist. will construct drainage system; reclaiming 7500 acres; issued \$177,000 bonds; Elliott & Harmon, Engrs. Address Volusia County Commrs.

Ga., Griffin — Spalding County Drainage Dist. No. 1 Commrs. H. V. Kell, Chrmn., will complete construction of ditch along Wolf and Dobbins Creek; reclaiming about 600 acres; issued \$35,000 bonds.

Mo., Carrollton — Norborne Land Drainage Dist. will expend about \$50,000 on drainage system; reclaiming 40,000 acres land.

Electric Plants.

Fla., San Antonio — City will establish electric light plant; voted \$6,000 bonds; plans extending line from Dade City electric plant to San Antonio. Address The Mayor.

La., Hammond — City will improve and extend lighting system; voted bonds. Address The Mayor.

Mo., Parkville — Kansas City Light & Power Co., 14th St. and Grand Ave., Kansas City, Mo., contemplates constructing transmission line from Parkville to Farrell View.

N. C., Pilot Mountain — City will install electric lighting system and erect school building; vote Nov. 7 on \$65,000 bonds. Address The Mayor. (Lately noted contemplated.)

N. C., Pittsboro — Chamber of Commerce interested in installing lighting system.

N. C., Red Springs — Town will issue \$50,000 electric light and water bonds; Hiram Grantham, Mayor.

N. C., Stantonsburg — Town plans issuing \$20,000 bonds for constructing electric light system; G. L. Hill, Clk.

Tenn., White Pine — White Pine Power & Light Co., G. M. Felmet, Owner, will erect 60x60 ft. fireproof power house; construction by owner; install 100 K. W. steam outfit; contract let. (See Mch. Wanted—Power Plant Machine.)

Tex., Edinburg — City, A. J. Ross, Mayor, will construct electric light and water plants; bids opened; H. E. Wilcox, City Engr. Lately noted issued bonds. (See Mch. Wanted—Electric Light Plant.)

W. Va., Iaeger — United Light & Power Co., F. B. Lamb, Charleston, W. Va., let contract to West Virginia Engineering Co., Williamson, W. Va., at \$25,000 to construct 3 mi. transmission line and other improvement; purchased power from Kentucky & West Virginia Power Co., Logan, W. Va.; E. C. Birge Engr., Iaeger, W. Va. (Lately noted.)

W. Va., Middleway, P. O. Kearneysville — Northern Virginia Power Co., Winchester, Va., plans extending electric light line from Alba-Mari Lime plant to city.

W. Va., Wheeling — Davis — Carle Electric Co., incptd. by Ray L. Davis, J. H. Carle; both Wheeling; J. E. Rehm, Brookside, Ohio.

Flour, Feed and Meal Mills.

La., Thibodaux — Bro-Ko Feed Co., organized with Leonce J. Bourdreux, Prest.; Edw. J. Comeaux, Secy.-Treas.; established plant to mfr. feed.

N. C., Wadesboro — Allen Milling Co., H. P. Allen, Owner, will erect 72x32 ft. ordinary wood construction mill building; construction by owner; install mch.; output 200 bu. every 24 hours. (Lately noted, H. B. Allen will erect roller mill.)

Tenn., White Pine — G. M. Felmet will rebuild mill recently burned at loss of \$20,000 to \$25,000.

Foundry and Machine Plants.

Ala., Birmingham — Cast Iron Pipe — J. R. McWane interested in organizing McWane Iron Pipe Co., to mfr. special designs of cast iron pipe.

Ala., Gadsden — Pipe — Agricola Pipe Co. Otto Agricola, Prest., will erect 100x412 ft. fireproof building, steel and concrete, construction by owner; install equipment. (Lately noted to rebuild burned plant.)

Fla., Kissimmee — Machine Shop — Beindorf Machine & Supply Co., Paul Beindorf contemplates establishing plant, move equipment from Lichtfield, Ill.

Ga., LaGrange — Rail Joints — George W. Duke, interested in organization of Duke Boltless Rail Joint Co., with \$100,000 capital.

Ky., Louisville — Tools — Louisville Electric Mfg. Co. increased capital from \$75,000 to \$155,000.

Mo., Leeds — Spiral Pipe — Kansas City Spiral Pipe Co., E. J. Gordan, Secy., Dwight Bldg., Kansas City, Mo., have purchased 7½-acre site, will erect first unit of plant, costing \$65,000, under direction of D. B. Farnsworth, Jr., Gen. Mgr.; first mch. units are being built by Wheatley Bros. Machinery Co., Kansas City, Mo., costing \$20,000; capacity 10,000 ft. steel spiral pipe every 8 hours.

Okla., El Reno — Machinery. — El Reno Foundry & Machine Co., capital \$25,000, incptd. by Frank Kraft, H. T. Smith and E. H. Breuer.

W. Va., Huntington — Locomotives, etc. — Westinghouse Electric Mfg. Co., E. Pittsburgh, Pa., will establish branch, occupy 3-story 100 ft. square, brick and steel building, costing \$100,000; erected by Hines-Bailey Corp.

Gas and Oil Enterprises.

Ark., El Dorado — Refinery — Grison Refining Co. is erecting refinery; reported to install Ryan system, to make gasoline and fuel oil.

Ky., Bellevue — Prestonsburg Superior Gas Co. increased capital from \$25,000 to \$35,000.

Md., Baltimore — Burbank Oil Co., Maryland Casualty Tower, capital \$100,000, incptd. by Jas. A. Latane, Wm. Lentz and Edna. M. Kaufman.

Md., Baltimore — California Oil Mining Corp., 1010 Keyser Bldg., capital \$1,000,000, incptd. by Elsie E. Hoch, L. Ruth Athey and J. Loran Bowles.

Mo., Kansas City — Refining — Diamond Refining Co., capital \$5,000,000, incptd. by B. E. Bush, Kansas City, Mo.; Thos. E. Elliott, Tulsa, Okla.; Jos. K. Timmons, Bonner Springs, Kan.

N. C., Charlotte — Southern Public Utilities Co., is expending \$10,000 to extend and improve gas plant; install additional equipment including Buffalo blower; rehabilitate water gas set at plant.

Okla., Burbank — Burbank Gas Co., incptd. by W. Sheel, W. E. Blackburn and T. J. Pinkston.

Okla., Chickasha — Chickasha Gas & Electric Co., plans expending \$40,000 to construct gas line to connect distributing system in city with mains of Oklahoma Natural Gas Co.

Okla., Okmulgee — Belmont Oil & Gas Co., capital \$10,000, incptd. by J. Frank Graham, Fred K. Moulton and G. M. White.

Okla., Tulsa — Utoke Petroleum Corp., capital \$350,000, incptd. by D. G. Powell, H. C. and H. J. Ziegler.

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Okla., Tulsa — Pipe Line — Burbank Pipe Line Co., capital \$50,000, incptd. by J. F. Darby, Joe F. Johnson and S. B. Griffith.

Tex., Currie, R. D. from Wortham — Refinery — Humphreys-Texas Oil Co., will erect refinery.

Tex., Laredo — Pipe Line — Texpata Pipe Line Co., capital \$100,000, incptd. by O. W. Killam, Colon Schott and Henry L. Adams.

W. Va., Bluefield — A. B. Brode and associates plans constructing pipe line for natural gas through Pocahontas coal field to city.

Ice and Cold-Storage Plants.

Ala., Fort Payne — A. A. Miller interested in organization of \$10,000 company to establish ice plant.

Ga., Columbus — Citizens Ice & Fuel Co., organized by W. T. Gould, Diamond Court Apt., Columbus, and H. R. Brickerstaff, St. Louis, Mo., will expend between \$30,000 and \$40,000 on erecting ice plant; daily capacity from 30 to 50 tons.

La., Monroe — Consolidated Ice Co. will expend from \$40,000 to \$50,000 on plant improvements, increase capacity, install additional freezing tanks, etc.

N. C., Tarboro — Red Gum Veneer Co., W. B. Henry, Mgr., contemplates installing cold storage plant, 10,000 bbl. capacity, cold air circulation plan. (See Machinery Wanted—Cold Storage Plant.)

Tex., Austin — Lone Star Ice Co., A. J. Zilker, Prest., let contract to Richard Schmidt at \$48,000 to erect ice and cold storage plant reinforced concrete frame, tile walls, brick facing with cork insulation; Gleescke & Harris, Archt., Littlefield Bldg.

Tex., Lockhart — Rader & Story will occupy brick building to be erected by Ed. A. Masur, install refrigerating system.

Tex., Luling — City contemplates establishing ice plant. Address The Mayor.

Va., Bristol — Bristol Milling & Mfg. Co. will erect 30-ton capacity ice mfg. plant view to enlarging if needed, purchased property of Bristol Milling Co., initial cost about \$50,000; also purchased property of Hitch Ice & Mfg. Co. of Maryville, Tenn.

Irrigation Systems.

Tex., Wichita Falls — Wichita County Water Improvement Dist. No. 1, Morgan Bldg., will construct irrigation distributing system in connection with reservoir and canal system bids until Nov. 15; F. N. Lawton, Gen. Mgr. (See Water-Works.)

Land Developments.

Fla., Daytona — G. M. Randall has 160-acre site; will develop for agricultural purposes and residences.

Ga., Atlanta — Rose Brothers, Chicago, Ill., is reported contemplating developing Camp Gordon for residential suburb.

Ky., Louisville — Live Oak Land & Development Co., capital \$25,000, incptd. by J. H. Ferring, R. E. Wixon and W. M. Viser.

Md., Baltimore — Joseph F. Moreland, Hamilton, Baltimore, Md., purchased 39½-acre site on Harford Road; will develop.

N. C., Biltmore — Biltmore Forest Holding Co., acquired 85.67 acre site on Hendersonville Road; will develop for residential section, etc.

Tex., Denton — City, plans purchasing site for City Park; H. V. Hennen, Mayor. (Lately noted voted bonds.)

Lumber Manufacturing.

Fla., Vero—Redstone Lumber & Supply Co. will rebuild plant burned at loss of \$26,000.

Miss., Ellisville — Long Branch Lumber Co., N. McKinstry, Mgr. (lately noted to rebuild burned plant), will erect 30x120-ft. main building with 30x60-ft. side platform; mill construction; install 8 ft. band mill, 5 saw edger, 2 saw trimmer, live rolls, shaftings, pulleys, belts, etc.; daily output 25,000 ft. hardwood and pine; W. P. Craft, Archt. (See Machinery Wanted—Saw Mill Equipment.)

N. C., New Bern—Charles H. Hall Lumber Co., capital \$25,000, inceptd. by Charles H. Hall, LeRoy B. Willis and R. E. Whitehurst.

Okl., Mangum—Triangle Lumber Co., capital \$50,000, inceptd. by I. N. Wellman and K. W. Lanford, both Mangum; J. L. Kennedy, Shreveport, La.

Tex., Dallas—Clem—Johnson Lumber Co., capital \$15,000, inceptd. by R. H. Clem, Guy Johnson and Gus B. Moore.

Metal-Working Plants.

Ga., Atlanta — Nickle-Plating, etc. — Simmons Plating Works will erect 2 story addition to plant, plan extensive improvements, install additional mchy.

Md., Baltimore — Silverware — Baltimore Silver Mfg. Co., 728 E. Baltimore St., inceptd. by Max D. Paul, Louis and Morris Cohen.

Okl., Oklahoma City—Porcelain Pumps—Curtis Porcelain Pump Co., capital \$10,000, inceptd. by S. F. Curtis, Wiley W. Lowrey and Eben L. Taylor.

Okl., Tulsa—Auto Locks—Hughes Auto Lock Co., capital \$150,000, inceptd. by L. W. McFetridge, W. A. Rupp and C. R. Nixon.

W. Va., Bluefield—Armature—West Virginia Armature Co., reorganized with W. A. Bishop, Prest.; A. L. Smith, V.-P. and Gen. Mgr.; J. W. Bailey, Secy.-Treas.; acquired control and management of American Armature & Engineering Co.

W. Va., Charleston—Tubes—Non-deflating Tube Sales Co., capital \$25,000, inceptd. by J. L. Depuy, A. C. Carey and C. W. Rodes.

Mining.

Ala., Hopewell—Mining—Hopewell Mining Co. inceptd. with Frank S. Wells, Prest.-Gen. Mgr.; W. J. Abele, Secy.-Treas.

Ky., Covington — Asphalt — Black Rock Asphalt Co. inceptd. by John M. Crowe, Louis K. DeBus and C. W. Simrall.

Ky., Somerset—Asphalt—Continental Room Asphalt Co., capital \$300,000, inceptd. by W. A. White, J. E. Waddle and A. L. Lampton.

Md., Baltimore — Potash, etc.—Mineral Potash Corp., 712 Equitable Bldg., capital \$750,000, inceptd. by Wallace W. DeBuys, Matthew D. O'Connor and George D. Brownley.

Okl., Bromide—Lime—Bromide White Lime Co., capital \$100,000, inceptd. by Fred Barrett, Bromide; Clarence L. Rallsback and Dayton P. Kelpinger, Kansas City, Mo.

Okl., Oklahoma City — Mining, etc. — Golden Rod Mining & Smelting Co., capital \$1,600,000, inceptd. by Frank M. Houston, Willis Bynum and Harry H. Leaming.

Miscellaneous Construction.

Fla., Miami—Channel—Bakers Haulover Dist., J. C. Balle, Chrmn., contemplate constructing and maintaining cut 200 ft. wide and 1200 ft. long, between Atlantic Ocean

and Biscayne Bay; approximate cost \$300,000; plans according to War Dept.; Hobart Crabtree, Temporary Engr. (See Mchy. Wanted—Steel Piling, etc.)

Fla., Pablo Beach — Recreation Pier — Charles Shad applied for franchise to erect \$40,000 recreation pier, 600 ft. long, first 450 ft. to be 20 ft. wide, also build 150x100-ft. pavilion on end of pier for dining room, dance hall and other amusements; J. A. Bussey, Mayor.

La., Mandeville—Docks, etc.—City will construct docks, etc.; voted bonds. Address The Mayor. (Lately noted to vote on \$25,000 bonds.)

Tenn., Nashville—Swimming Pool—Cascade Aquatic Club, Cascade Corp., 501 American Trust Bldg., contemplate constructing swimming pool; estimated cost \$150,000; S. M. McMurray Engineering Co., Engr.

Tex., New Braunfels—Stand Pipe—City, Chas. Alvers, Box 196, Mayor, will construct \$30,000 steel stand pipe with concrete foundation; bids until Nov. 10; M. L. Diver, Conslt.-Engr., San Antonio, Tex. (See Machinery Wanted—Stand Pipe.)

Tex., Wichita Falls—Canal System, etc.—Wichita County Water Improvement Dist. No. 1 F. N. Lawton, Gen. Mgr., Morgan Bldg., construct canal system, consisting of storage dam, spillway, etc.; bids until Nov. 15. (See Water-Works.)

Va., Charlottesville—Heating Plant—University of Virginia, Edwin A. Alderman, Prest., let contract to Almirall Co., Inc., 1 Dominick St., New York City, to install part of central heating plant; Legislature appropriation \$80,000.

Miscellaneous Enterprises.

Fla., Miami—Publishing—Union Publishing Co., capital \$20,000, inceptd. with J. M. Sanderson, Prest.; Walter Hoyt, Secy.-Treas.

Fla., Miami — Moving Picture Studio — Miami Studios Corp., Glenn H. Curtis, Prest., New York City, let contract to J. W. Bennet to construct picture studio at Hialeah; plan includes laboratory, factory buildings, etc.; purchased site of 140 acres; initial expenditure estimated to exceed \$250,000; T. J. Bevis, Supt. of construction.

Ga., Hephzibah—Potato Curing—Hephzibah Potato Curing Co., inceptd. by Edward P. Dicks, R. H. Burkhalter and George W. Wingate.

Ky., Lexington—Sign Service—Ramsey Sign Service Co. inceptd. by L. H. Ramsey, J. A. Roan and D. H. Goodlette.

Ky., Pineville—Hatchery—T. J. Asher interested in establishing fish hatchery; plans by State Game and Fish Comsn., Dr. R. S. Tuttle, executive Agt.; Frankfort, Ky.

Md., Baltimore—Motion Picture Films—Palmore & Homand, 420 E. Lexington St., inceptd. with \$250,000 capital.

Md., Baltimore — Publishing — I. & M. Ottenheimer, 800 E. Fayette St., let contract to Decos & Davis, 404 W. Baltimore St. to remodel building recently purchased; Stanislaus Russell, Archt., 11 E. Lexington St.

Tex., Stratford—Elevator—Farmer Equity Elevator Co., capital \$15,000, inceptd. by D. D. Spurlock, W. R. Gamble and Arthur Mullins.

N. C., Winston-Salem—Publishing—Journal Publishing Co. increased capital from \$100,000 to \$200,000.

S. C., Charleston—Abattoir—City contemplates purchasing Charleston Abattoir Co.'s plant. Address Mayor Grace.

S. C., Greenville—Laundry—Ideal Laundry,

John W. Powell, Propr., let contract to Perkins Construction Co. to erect 2 story, 50x75 ft. laundry building, brick and hollow tile construction; estimated cost \$10,000.

S. C., Loris—Hardware—People's Hardware Co., inceptd. with D. W. Hardwick, Prest.; J. W. Hardwick, Secy.-Treas.; J. A. Bryant, Gen. Mgr.

Tenn., Murfreesboro—Transfer—Murfreesboro Transfer Co., capital \$10,000, inceptd. by Eph Hoover, Ray Quarles and H. P. Morton.

Tex., Beaumont—Publishing—News Publishing Co., capital \$25,000, inceptd. C. L. Schless, Sol E. Gordon and I. W. Lawhon.

Tex., Mexia—Builders Supplies—Builders' Supply Co., capital \$20,000, inceptd. by R. B. Albaugh and A. B. Stringer.

Archt.

Tex., Ranger—Poultry Ranch and Hatchery—Lackland Bros. Poultry Ranch and Hatchery, (lately noted inceptd., capital \$50,000), organized with Rufus C. Lackland, Prest.-Mgr.; A. A. Abney, Secy.-Treas., will erect 40x400-ft. incubator and brooder house; six 24x200-ft. laying houses; install \$10,000 incubators and brooders; plans by U. S. Government experimental station. (See Machinery Wanted—Fencing; Roofing.)

W. Va., Clarksburg—Incinerator—City let contract to Charles F. Walther, Johnstown, Pa., at \$13,000 to install 30 ton capacity incinerator; 1½ story, brick and cement construction, reinforced concrete roof. (Lately noted to install.)

Miscellaneous Factories.

Ala., Birmingham—Candy—Harrison Candy Co., inceptd. with W. V. Harrison, Prest.-Treas.; A. B. Lonergan, V.-P. and Secy.

Ala., Tuscaloosa—Paper and Pulp—Chamber of Commerce, J. B. Brosius, Secy., interested in organizing \$2,000,000 corporation to establish pulp plant and paper mill.

D. C., Langdon Sta., Washington—Yeast—Fleischmann Yeast Co. will make alterations to plant; bids opened; plans by Milburn, Helster & Co., Washington. (Lately noted.)

Fla., Eustis — Bottling — F. C. Millirons, Quincy, Fla., will establish bottling plant; purchased machinery.

Fla., Fort Myers—Tobacco, etc.—Gonzalez Co., capital \$10,000, inceptd. with E. F. Scott, Prest.; R. A. Henderson, Jr., V.-P.; J. L. Scott, Secy.-Treas.

Fla., Gary, P. O. Tampa—Bottles—Southern Bottle Mfg. Co., I. F. Jones, Prest., let contract to Oatley-Jones Co., to construct 1-story 60x160 ft. brick construction, with concrete floors, main building; install 2 tanks; mfr. jelly glasses, milk bottles, etc.; daily capacity 150 gross; will install 12x65 ft. layers or kilns in main factory building; will erect 62x36 ft. brick and concrete construction warehouse. (Previously noted.)

Fla., Inverness—Bottling—Inverness Bottling Works, W. T. Baley, Propr., will erect building; install machinery for bottling plant.

Fla., Ocala—Creamery—Marion County Creamery Co., H. L. Shearer, Secy., Cottage Hill, will establish creamery; machinery ordered. (Lately noted inceptd.)

Fla., Pensacola—Clothing—Manufacturers Sales Co., R. M. Beardslee, Milwaukee, Wis., contemplates establishing factory to mfr. clothing.

Ga., Atlanta—Vinegar—Lyons Brothers Co., Dallas, Tex., plans enlarging plant.

Ga., Columbus—Overalls—Southern Overall Co., J. D. Schnell, Prest., will expend hundreds of dollars to install additional machinery in plant.

Ga., Tate—Marble—Georgia Marble Co., Sam Tate, Pres., will erect 368x168 ft. steel construction building; 61,824 sq. ft. floor space; install 30 gangs of saws, 9 rubbing beds and polishing machines and lathes; construct overhead cranes; electrically driven machinery. (Lately noted.)

Ky., Lexington—Remedies—J. L. West Remedy Co., capital \$12,000, inceptd. by J. L. West, E. G. Mann and R. R. Friend.

Ky., Maysville—Bakery—W. P. Farley Co. contemplate establishing bakery; install mchy. (See Machinery Wanted—Bakery Equipment.)

Ky., Princeton—Gloves—G. J. Phillips, Box 385, contemplates establishing factory to mfr. gloves. (See Mchy. Wanted—Cutting and Stitching Machines; Hides; Canvas.)

La., Alexandria—Shoes—Ledger-Clark Shoe Co., L. J. Ledger, Secy.-Treas.-Mgr., will improve plant; install repair dept.; ordered mchy. (Lately noted inceptd., capital \$10,000.)

La., New Orleans—Condensed Milk, etc.—Cloverdale Dairy Co., Geo. A. Villere, Mgr., plans erecting 4 or 5 story plant, reported cost \$500,000; purchased site; install automatic mchy.; will use surplus milk for mfr. of by products, specializing in condensed milk.

Mo., Jackson—Shoes—International Shoe Co., St. Louis, Mo., plans establishing \$100,000 plant.

Mo., Kansas City—Brooms—Artzcraft Broom Co., Wm. A. Field, Owner, 1423 Kansas Ave., let contract to A. E. Madorie, at \$23,000, to erect 2-story 110x55 ft. mill construction building; has machinery; daily capacity, 200 doz. brooms; Smith, Rea & Lovitt, Archts. (Lately noted.)

Miss., Meridian—Soaps, etc.—Bang-Go Soap Mfg. Co., 2304 Front St., capital \$20,000, organized with R. E. Yarbrough, Pres.; W. F. McDonald, Secy.-Treas.; L. L. Gunn, Mgr.; will erect \$10,000 building; fireproof construction; bids until Jan. 1; install soap making mchy. (See Machinery Wanted—Soap Making Machinery.)

N. C., La Grange—Overalls—Merchants' Mfg. Co., J. P. Joyner, Pres., will establish plant to mfr. overalls.

Okla., Enid—Clothing—Union Garment Mfg. Co., capital \$20,000, inceptd. by B. A. Clappitt, Enid; E. B. Meyers, Burlington, Okla.; C. W. Mastin, San Antonio, Tex.

Okla., Vinita—Barber Supplies—C. H. Stuart & Co., New York, purchased warehouse; will remodel for plant to mfr. barber supplies.

S. C., Florence—Dairy Products—Haynesworth & Lawton awarded contract to erect 4-story building; initial cost \$35,000, with building designed for \$150,000 expansion; install cold storage and refrigeration; daily churning capacity 5,000 lbs. butter.

S. C., Greenville—Soap—Greenville Soap Co., inceptd. with C. C. Hindma, Pres.; J. E. Robbins, V.-P.; R. G. Sotne, Secy.-Treas.

Tenn., Carthage—Creamery—Smith County Council of Agriculture, Jno. D. Robinson, Carthage, interested in establishing creamery.

Tex., Dallas—Calendars, etc.—Dallas Art & Novelty Co., E. L. Henderson, Gen. Mgr., purchased Aviation Repair Depot at Lovefield, consisting of 54 acres complete with streets, sewers, water system, electric lines, etc. with 2 large buildings and several small

ones; mfr. calendars, specialties, leather goods, signs, etc. (Supersedes recent item under Woodworking Plants.)

Va., Bristol—Hats—J. H. Meeker, Roanoke, Va., contemplates establishing plant to mfr. men's hats.

Va., Lynchburg—Overalls—A. C. Barrow Overall Co., will enlarge plant; construct 4-story 120x25 ft. addition; mfr. overalls.

Va., Lynchburg—Shoes—Beasley Shoe Co., acquired Fritz-Richards Shoe Mfg. Co.'s plant; will mfr. leather shoes.

Va., Richmond—Leather Belting—Jerry Bros. Belting Co., 1823 E. Main St., let contract to C. F. Duggins, to construct 2-story and basement 135x24 ft. factory building; mfr. tanned leather belting.

W. Va., Beckley—Bakery—Beckley Wizard Bakery, R. D. Clark, Mgr., let contract to Mr. Cooper, at \$4,000, to erect 96x28 ft. sheet iron ordinary construction building; purchased \$12,000 machinery; daily capacity, 5,000 loaves. (Lately noted increased capital.)

W. Va., Huntington—Thermos Bottles—American Thermos Bottle Co., will expend \$22,500, to construct steel building; mfr. thermos bottles.

Motor Cars, Garages, Tires, Etc.

Ark., Little Rock—Garage—Reiman & Wolfert let contract to Wm. Peterson to erect 1 story garage, estimated cost \$15,000.

Ark., Little Rock—Service Station—Little Rock Auto Tow Service Co., 115 W. 20th St., let contract to Robt. A. Rinke to erect 2 story, 50x100-ft. fireproof garage, \$20,000; install auto repair mchy.

Fla., Eau Gallie—Garage—Dixie Garage making addition to building, double its capacity.

Fla., Jacksonville—Garage, etc.—Jax Auto Top Co., inceptd. with Arthur G. Schaefer, Pres.; Arthur E. Schaefer, Secy.-Treas.

Fla., Jacksonville—Garage, etc.—Burwell Motor Co. will occupy 100x73-ft. 2 story building, tapestry brick with buff trimmings; estimated cost \$40,000; erection by D. J. Conroy; P. J. McCullough Co., Contr.

Fla., Tampa—Automobiles—Ray B. Cralle Co., capital \$25,000, inceptd. by Ray B. Cralle, W. G. Golsen and W. L. Van Dyke.

Fla., Tampa—Automobile Accessories—De Vane S. Doyle Co., capital \$25,000, inceptd. with DeVane S. Doyle, Pres.; Clinton F. Shepard, Secy.-Treas.

Fla., West Palm Beach—Filling Station—Jas. Asher, advises will not build gas and oil filling station, as lately noted.

Fla., West Palm Beach—Garage, etc.—Dixon Buick Co., E. A. Allen, Mgr., 119 S. Poinsettla St., let contract to L. G. Hise, at \$37,500 to erect 75x128-ft. fireproof building; install \$5,000 mchy. and equipment, bids until Nov. 1; Wm. B. Eckler, Archt.; E. B. Ford, Const. Engr. Supersedes previous item.

Ga., Macon—Motors—Baker Motor Co., capital \$10,000, inceptd. by Thomas N. and William S. Baker.

Ky., Glasgow—Motors—Dickenson Bros. Motor Co. increased capital from \$20,000 to \$40,000.

Miss., Jackson—Garage, etc.—Dixie Motor Sales Co., S. W. Grant, Mgr., will occupy 50 x140-ft. fireproof building, equipped with sprinkler system; N. A. Dyer, Contr.; W. A. Brasher, Archt., E. Capital St.

Mo., Butler—Motors—Rockhold Motor Co., capital \$60,000, inceptd. by H. D. Rockhold, Butler; W. H. Duff, Seneca, Mo.; E. S. Sturgis, Neosho, Mo.

Mo., Kansas City—Filling Station—National Refining Co. will erect filling station; purchased site.

Mo., St. Louis—Automobile Accessories—Johnson Springs Mfg. Co., capital \$30,000, inceptd. by H. A. Dougherty, Estel Scott and Albert E. Johnson, all Kansas City, Mo.; mfr. springs, auto parts and accessories.

N. C., Charlotte—Garage, etc.—Charlotte Motor Car Co. will occupy 75x120-ft. building (See Machinery Wanted—Garage Equipment.) cost \$30,000; to be erected by Dolph Young; J. A. Jones, Construction Co., Contr.; L. L. Hunter, Archt.

Okla., Blackwell—Murdoch Motor Co., capital \$50,000, inceptd. by D. H. Murdoch, C. R. Frankenberry and J. T. Sanders.

Okla., Clinton—Service Station, etc.—C. H. Murdoch, Cordell, Okla., will erect 50x130 ft. brick and tile building, cement or tile floor; bids open about Oct. 20; Layton & Smith, Archts. Southwest National Bank Bldg. Oklahoma City, Okla. (See Machinery Wanted—Building Materials.)

Okla., Lawton—Thomas Motor Co., capital \$25,000, inceptd. by Stanley Thomas, Milton R. Combs, both Lawton; J. H. Gordon, McAlester, Okla.

Okla., Oklahoma City—Garage, etc.—Stearns Sales Co. will erect 2 story 50x140 ft. garage and sales room, brick and stone construction, \$35,000.

Okla., Okmulgee—Garage—Oklahoma Auto Service Co., capital \$10,000, inceptd. by Harry Helmrich, R. E. Edwards and H. E. Todd.

Okla., Quapaw—Mercury Motors Corp., capital \$250,000, inceptd. by W. L. Bingham, G. W. Rottweiler, and M. E. Douthat.

Okla., Tulsa—Garage—Oil City Garage, capital \$50,000, inceptd. by Louis Novick, J. and Anna Albert.

S. C., Charleston—Automobile Accessories—Carolina Houdaille Corp., inceptd. with E. F. Blakeley, Pres.; Vernon Tobias, Secy.-Gen. Mgr.

S. C., Columbia—Garage, etc.—Palmetto Motor Co., capital \$40,000, inceptd. with H. C. Leaman, Pres.; I. M. Mauldin, Secy.-Treas.

S. C., Greenville—Service Station—W. N. Watson let contract to W. M. Jordan to remodel 2 story brick building and erect 2 story additional building, metal ceiling, metal doors, concrete floors, estimated cost \$10,000; install electric elevators. (See Machinery Wanted—Elevators.)

S. C., York—Filling Station—Simrill Oil Co., inceptd. by J. Ross Cannon and Frank M. Simrill.

Tenn., Nashville—Automobile Novelties—Universal Novelty Mfg. Co., capital \$10,000, inceptd. by W. R. Young and E. Y. Baxter.

Tenn., Nashville—Motors—Earl Motors, Inc., reorganized with Clarence A. Earl, Pres.; changed name from Briscoe Motor Corp.

Tex., Bartlett—Motors—Miller Motor Co., capital \$16,000, inceptd. by R. W. Monroe and Wallace R. Miller.

Tex., Commerce—Motors—Kellam Motor Co., capital \$15,000, inceptd. by Chas. Kellam, Jr., and F. O. Hunter.

Tex., Currie, P. O. Richland—Garage—Pittman & Nance let contract for erection of garage, brick construction.

Tex., Dallas—Service Station—Service Station Equipment Co., increased capital from \$20,000 to \$30,000.

Tex., Harrisburg—Motor—Harrisburg Motor Co., capital \$10,000, inceptd. by George W. Richardson, J. E. Sellman and T. E. Martin.

Tex., Houston—Motors—Bailey Motor

Sales Co., capital \$50,000, incptd. by James H. Bailey, John R. Scott, Jr., and Henry Mayfield.

Tex., Long View—Motors—C. P. Nevill Motor Co., capital \$20,000, incptd. by L. N. Byrd, S. B. Brooks and W. L. Beckham, Jr.

Tex., Palestine—Motors—Garrett Motor Co., capital \$30,000, incptd. by Max W. Garrett, T. P. Wier and E. R. Anderson.

Tex., Perryton—Motors—Hobbs Motor Co., capital \$24,000, incptd. by L. S. Hobbs, W. B. Lemaster and D. E. Woodward.

Tex., Port Arthur—Motors—Linn Motor Co., capital \$150,000, incptd. by T. F. Linn, D. P. Sheeks and M. E. Kleas.

Tex., San Antonio—Garage—Hood-Burger-Mansfield Co., capital \$15,000, M. K. Hood, H. S. Mansfield and F. H. Burger.

Tex., Sterling City—Motors—Sterling Motor Co., capital \$20,000, incptd. by Wm. Scheeman, Jr., Fred Schmidt and Oscar Ruffinit.

Tex., Wichita Falls—Motor—Williamson-Thompson Motor Co., capital \$20,000, incptd. by W. O. Williams, W. K. Thompson and B. L. Morgan.

Va., Coeburn—Motors—Wall Motor Co., capital \$30,000, incptd. by R. F. and Wm. Culbertson.

W. Va., Charleston—Motors—Jones-Wolfe Motor Car Co., capital \$25,000, incptd. by Quince Jones, H. W. Bowers and J. M. Schwenfelt.

W. Va., Fairmont—Garage, etc.—Marion Motor Co., 304 Jacobs Bldg., capital \$40,000, incptd. with L. G. Roop, Prest.; John Cole, Secy.; R. A. Johnson, Treas.; will erect 22x50-ft. fireproof building.

W. Va., Morgantown—Garage—Guy Hall will erect 2 story brick and concrete commercial garage; \$20,000.

W. Va., Fairmont—Motors—Marion Motors Co., capital \$40,000, incptd. by L. G. Roop, J. B. Moore and J. R. Cole.

W. Va., Warfield—Garage—Kermit Garage, capital \$10,000, incptd. by B. F. Maynard, A. B. Pinson and T. R. Moore.

W. Va., Wheeling—Motors—Garby Motor Corp., capital \$150,000, chartered by M. E. Garby, R. H. Mohlike and A. C. Shiffer.

W. Va., Wheeling—Automobiles—Pleasant Valley Automobile Co., capital \$100,000, incptd. by George W. Row, L. G. Fulton and H. R. Markell.

Railway Shops, Terminals,

Tex., Kingsville—St. Louis, Brownsville & Mexico R. R., C. S. Kirkpatrick, Ch. Engr., Houston, Tex., will rebuild shops.

Road and Street Construction.

Ala., Birmingham—City Comsn. let contract to J. L. Mullarkey, at \$25,880 to pave 34th St. and Ave. E. Wylam part of East and West highway; Julian Kendrick, City Engr.

Ala., Birmingham—Jefferson County will surface with clinders, shale or chert the following roads; Mulga to Port of Birmingham, 11 mi.; Warrior-Robbins road, 10 mi.; Trussville to Acmar road, 5 mi., and Oak Grove-Lock 17 road, 6 mi.; bids until Nov. 11; C. J. Rogers, County Highway Engr. (See Machinery Wanted—Road Construction.)

Ala., Butler—State Highway Comsn. of Alabama, Montgomery, Ala., plans 1.08 mi. road between Riderwood and Mississippi Alabama state line; sand-clay with gravel surface; cost \$109,970.30.

Ala., Tusculumbia—State Highway Dept., Montgomery, Ala., plans constructing 8.6 mi. highway between Tennessee river and

Florence; cost \$192,728.64; bids about Dec. 1; A. P. Henderson, Div. Engr., Decatur, Ala. (See Machinery Wanted—Road Construction.)

Ark., Little Rock—Street Improvement Dists. 301, 302, 295 and 296, let contracts to Moreno-Burkham Construction Co., So. Trust Bldg., at \$110,000 to construct 10,000 cu. yds. grading; 14,700 lin. ft. curb and gutter; 24,000 sq. yds. sheet asphalt on 5-in. concrete base; etc.; \$120,000 available; Dickinson & Watkins, Engrs., 610 Boyle Bldg. (Lately noted inviting bids.)

Fla., Apopka—City will sell \$50,000 bonds for street improvements. Address The Mayor.

Fla., Kissimmee—Osceola County will construct 6 mi. road in Special Road and Bridge Dist. No. 4; bids until Oct. 29; J. L. Overstreet, Clk. County Comms. (See Machinery Wanted—Road Construction.)

Fla., Kissimmee—Osceola County sold \$80,000 bonds for road construction; J. L. Overstreet, Clk. County Comms.

Fla., Mt. Dora—Town will construct 47,000 sq. yds. sheet asphalt pavements, 43,000 lin. ft. cement curb, etc.; bids until Nov. 15; J. H. Crane, Clk. (See Machinery Wanted—Paving.)

Fla., Tampa—City will grade, pave and curb Westland Ave., 2,685 sq. yds. pavement; Melville Ave., 1,300 sq. yds. pavement; Sixteenth St., etc.; bids opened Oct. 25; Chas. H. Brown, Mayor Commr. (See Machinery Wanted—Paving.)

Fla., Tampa—City will pave streets as follows: Jetton Ave. from west side of Fremont Ave. to Rome Ave.; 24-ft. wide; asphalt blocks and granite curbing; 1,850 sq. yds. pavement; 1,300 lin. ft. curbing; Rome Ave. from Swann Ave. to Snow Ave.; 20-ft. wide; asphalt blocks; 1,500 sq. yds. pavement; bids opened Oct. 18; Wm. E. Duncan, City Clk.

Ga., Calhoun—Gordon County sold \$300,000 road construction bonds. Address County Comms.

Ga., Sylvania—Screven County will grade 12.5 mi. road together with sand-clay surfacing; 3 concrete bridges and culverts. Address County Comms.

Ky., Louisville—Board Public Works let contracts for constructing and reconstructing alleys; concrete; cost \$15,174.20.

La., Harrisonburg—Catahoula Parish let contract to Smith Bros. Alexandria, La., to grade and gravel 70 mi. roads; cost \$860,000; J. B. Fain, Prest. Police Jury. (Lately noted inviting bids.)

La., Monroe—Ouachita Parish will construct 15 to 20 mi. Dixie-Overland highway between Monroe and Lincoln parish line; cost \$150,000; will invite bids; H. M. Boyd, Parish Engr. (Lately noted selling \$1,500,000 bonds.)

La., Monroe—City will construct 42,000 sq. yds. paving; 15,000 cu. yds. grading; 22,000 ft. concrete curb and gutter; storm sewers; etc.; bids until Nov. 2; P. A. Poag, Secy.; R. S. Reynolds, City Engr. (Lately noted. (See Machinery Wanted—Paving.)

La., Shreveport—City will pave Johnson St. from Fourth to Tenth Sts.; vertical fiber brick; bids opened Oct. 21; V. M. Ake, Secy.-Treas.

La., Slidell—City let contract to Bonabel Construction Co., Gulfport, Miss., for graveling 2 mi. streets and building 2 concrete bridges.

La., Vidalia—Concordia Parish will sell \$50,000 road construction bonds; John Dale, Jr., Secy. Police Jury.

Md., Baltimore—Paving Comsn. let contract to Christliff & Ensey, 608 Munsey Bldg., to pave Chesapeake Ave.; 700-ft. of 20ft. pavement; 20ft. concrete roadway; cost \$36,000.

Md., Baltimore—Board of Awards will grade, curb and pave streets listed in Contracts Nos. 202-OA, 203 OC and 204OC; cement concrete, sheet asphalt, new granite block and vitrified block; 1010 sq. yds. cement concrete; 5,650 sq. yds. sheet asphalt; 1,370 sq. yds. cement concrete; bids opened Oct. 26. (See Machinery Wanted—Paving.)

Miss., Hazlehurst—Copiah County, Dist. 4 voted Oct. 17 on \$50,000 bonds for construction of Port Gibson, Carpenter and other roads. Address County Comms.

Miss., Yazoo City—Yazoo County may vote on \$500,000 bonds for road construction. Address Board Suprys.

Mo., Buffalo—State Highway Dept., Jefferson City, Mo., let contract to C. F. Johnson & Son, Buffalo, at \$11,122.32 to construct 4,091 mi. State road from Urbana southward and Tunas southward, Sedalia-Springfield State road; Dallas County, State Aid Project 20.84; H. P. Moberly, Div. Engr., Woodruff Bldg., Springfield, Mo. (Lately noted inviting bids.)

Mo., Caruthersville—State Highway Dept., Jefferson City, Mo., will construct 2.386 mi. State road from Holland southward; Pemiscot County, State Aid Project 20.101; cost \$6,768.98; M. S. Murray, Div. Engr., Sikeston, Mo.

Mo., Columbia—Boone County will expend \$16,000 for improvement of Jefferson City-Columbia road. Address County Comms.

Mo., Lamar—State Highway Dept., Jefferson City, Mo., will construct 17.00 mi. State road from Lamar northward, eastward and westward; Barton County, State Aid Project 20.104; cost \$42,566.96; H. P. Moberly, Div. Engr., Springfield, Mo.

Mo., Lancaster—State Highway Dept., Jefferson City, Mo., let contract to Cox Bros., Dike, Iowa, at \$25,005.81, to construct 6.09 mi. State road from Lancaster eastward and southward; State Aid Project 20.48. Schuyler County, M. J. Hanick, Div. Engr., Howe Bldg., Macon, Ga. (Lately noted inviting bids.)

Mo., Sedalia—State Highway Dept., Jefferson City, Mo., will construct 1.638 mi. State road from Sedalia southward; Pettis County, State Aid Project 20.91; cost \$6,662.38; bids until Nov. 2; S. M. Rudder, Div. Engr. (See Machinery Wanted—Road Construction.)

Mo., Steelville—State Highway Dept., Jefferson City, Mo., will construct 7.21 mi. State road from Cuba westward; Crawford County, State Aid Project 20.105; cost \$28,930.77; H. D. Griffith, Div. Engr., DeSoto, Mo.

Mo., St. Genevieve—State Highway Dept., Jefferson City, Mo., will construct 1.461 mi. State road from Weingarten southwestward; St. Genevieve County, State Aid Project S 20.100; M. S. Murray, Div. Engr., Sikeston, Mo.

Mo., Waynesville—State Highway Dept., Jefferson City, Mo., will construct 1.371 mi. State road from Waynesville eastward; Pulaski County, State Aid Project 20.107; H. D. Griffith, Div. Engr., DeSoto, Mo.

N. C., Asheville—City will invite bids on paving Carter St. Address City Comms.

N. C., Bayboro—North Carolina State Highway Comsn., Raleigh, N. C., will construct

road in Pamlico County from Bayboro to Craven County line; bids until Oct. 27. (See Machinery Wanted—Road Construction.)

N. C., Burgaw—North Carolina State Highway Comsn., Div. Office, Wilmington, N. C., will construct 15 mi. top-soil road in Pender County on Wilmington-Newbern Highway; Project 518; cost \$65,360; low bidder A. W. McClay, Richmond, Va. (Late-ly noted inviting bids.)

N. C., Charlotte—City will sell \$700,000 bonds for street improvements. Address Mayor Walker.

N. C., Charlotte—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Mecklenburg County; bids until Nov. 25. (See Machinery Wanted—Road Construction.)

N. C., Durham—North Carolina State Highway Comsn., Raleigh, N. C., will construct hard surface road in Durham County; bids until Nov. 8. (See Machinery Wanted—Road Construction.)

N. C., Elizabethtown—North Carolina State Highway Comsn., Dist. Office, Wilmington, N. C., let contract to J. F. Mulligan Construction Co., N. Wilkesboro, N. C., for 13 mi. top-soil road in Bladen County, between Clarkton and Robeson County line; Project 635; cost \$45,900; structures to Powell Paving & Contracting Co., Columbia, S. C., at \$31,300.

N. C., Gastonia—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Gaston County; bids until Nov. 25. (See Machinery Wanted—Road Construction.)

N. C., Goldsboro—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Wayne County from Goldsboro to Lenoir County line; bids opened Oct. 27. (See Machinery Wanted—Road Construction.)

N. C., Graham—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Alamance County; bids until Nov. 18. (See Machinery Wanted—Road Construction.)

N. C., Greensboro—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Guilford County; bids until Nov. 18. Late-ly noted. (See Machinery Wanted—Road Construction.)

N. C., Hayesville—Clay County, W. J. Winchester, Chmn. County Commrs., will sell \$100,000 road construction bonds.

N. C., Hillsboro—North Carolina State Highway Comsn., Raleigh, N. C., will construct hard-surface road in Orange County; bids until Nov. 8. (See Machinery Wanted—Road Construction.)

N. C., Leaksville—Board of Commrs., J. W. Norman, Clk., will sell \$45,000 street improvement bonds.

N. C., Lexington—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Davidson County; bids until Nov. 18. Late-ly noted. (See Machinery Wanted—Road Construction.)

N. C., Lumberton—North Carolina State Highway Comsn., Dist. Office, Wilmington, N. C., let contract to C. W. Lacy, Wilmington, N. C., for 3.3 mi. hard-surfacing in Robeson County; Project 621; reinforced concrete pavement and concrete pipe; estimated cost \$106,000. (Late-ly noted inviting bids.)

N. C., New Bern—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Craven County south of New Bern; bids until Oct. 27. (See Machinery Wanted—Road Construction.)

N. C., Newton—North Carolina State High-

way Comsn., Raleigh, N. C., will construct road in Catawba County; bids until Nov. 25. (See Machinery Wanted—Road Construction.)

N. C., Raleigh—North Carolina State Highway Comsn., will construct hard-surface road; bids until Nov. 8. (See Machinery Wanted—Road Construction.)

N. C., Rocky Mount—City let contract to Robt. G. Lassiter & Co., Raleigh, N. C., at \$238,000 to construct 67,000 sq. yds. paving; bitulithic on concrete base; Jno. J. Wells, Civil Engr., Rocky Mount, N. C. (Late-ly noted inviting bids.)

N. C., Snow Hill—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Greene County from Snow Hill to Lenoir county line; bids until Oct. 27. (See Machinery Wanted—Road Construction.)

N. C., Statesville—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Iredell County; bids until Nov. 25. (See Machinery Wanted—Road Construction.)

N. C., Tarboro—Edgecombe County will construct hard-surfaced highway between Rocky Mount and Pitt county line via Tarboro; cost \$500,000. Address County Commrs.

N. C., Trenton—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Jones County from Trenton to Craven county line; bids Oct. 27. (See Machinery Wanted—Road Construction.)

N. C., Washington—City, J. R. Meekins, Clk., will sell \$200,000 street improvement bonds.

N. C., Weldon—Halifax County will construct 4 mi. sand-clay or clay-gravel roads to Halifax county, road from Tillery to Crowell's Cross roads; 4,000 cu. yds. sand-clay surfacing; 4,000 cu. yds. gravel surfacing; bids until Nov. 5; C. F. Gore, Supt. Highways. (See Machinery Wanted—Road Construction.)

N. C., Weldon—North Carolina State Highway Comsn., Raleigh, N. C., will construct 4.5 mi. hard-surface road between Weldon and Roanoke Rapids; bids opened Oct. 20.

N. C., Wentworth—North Carolina State Highway Comsn., Raleigh, N. C., will construct road in Rockingham County; bids until Nov. 18. (See Machinery Wanted—Road Construction.)

N. C., Whiteville—North Carolina State Highway Comsn., Dist. Office, Wilmington, N. C., let contract to J. A. Kreis, at \$39,400 for 15 mi. top-soil road in Columbus County, between Whiteville and Lake Waccamaw; Project 517; drainage structures to Cornell & Young, Macon, Ga., at \$54,317. (Late-ly noted inviting bids.)

Okla., Muskogee—Muskogee County Commrs. let contract to Froobe-Gravelle-Hamblin Co., at \$43,715.60 to construct 5 mi. hard-surface road from Four Mile garage south of Haskell to Okmulgee county line. (Late-ly noted inviting bids.)

Okla., Pawhuska—City let contract for paving 16 blocks at \$171,620. Address The Mayor.

Okla., Wagoner—Wagoner County will construct hard-surface road from Muskogee county line north through Shannon township; also free bridge over Verdigris river; voted \$45,000 bonds. Address County Commrs.

S. C., Anderson—Anderson County Highway Comsn. will construct 13 mi. Starr-Iva road and Spearman-Robinson road; bids opened Oct. 18; W. A. Sanders, Highway Engr.; W. Carl Austin, Secy. Highway Comsn.

S. C., Gaffney—Cherokee County Highway Comsn. let contract to Elliott & Sons, Spar-

tanburg, S. C., at \$20,000 to top-soil 9 mi. roads and construct bridges; \$80,000 available; T. J. Hester, Engr., Gaffney.

S. C., Gaffney—Cherokee County will construct top-soil road beginning at Derbin Littlejohn place and extending to Grindall Shoals bridge; 3 mi.; bids opened Oct. 18; W. E. Peeler, Secy. Highway Comsn.

S. C., Laurens—Laurens County let contract to J. M. Gregory, Danville, Va., at \$15,500 to top-soil 4.5 mi. road; N. C. Hughes, Jr., Engr. (Late-ly noted inviting bids.)

Tenn., Jonesboro—Washington County let contract to Moore Bros. to construct roads.

Tenn., Sevierville—Sevier County let contract to Gibson Construction Co., Knoxville, Tenn., at \$300,000 to construct and repair roads. (Late-ly noted.)

Tenn., Big Spring—Howard County let contract to Womack Construction Co., Houston, Tex., at \$275,000 for 34 mi. road; Job. 115-A, Federal Aid Project 235-A. (Late-ly noted inviting bids.)

Tex., Cameron—U. S. Dist. Engr., Fort Worth, Tex., approved plans for construction of 8.2 mi. 14-ft. gravel road on Highway No. 44 in Milan County; cost \$56,875.18; W. C. Gellis, County Judge; A. F. Mitchell, County Engr.

Tex., Crowell—Foard County will construct 20.34 mi. 24-ft. clay surfaced road on Highway No. 28; cost \$125,000; G. L. Burk, County Judge; L. Noland, County Engr.

Tex., Fort Worth—City let contract to West Texas Construction Co., Cotton Exchange Bldg., to construct 2,700 sq. yds. pavement, 2 in. warrentite bitulithic on 5 in. concrete base; etc.; cost \$10,000; D. L. Lewis, City Engr. (Late-ly noted inviting bids.)

Tex., Galveston—Galveston County Commrs. will let contract for improvement work on island road outside city limits; cost \$10,000; John M. Murch, County Auditor.

Tex., Galveston—Galveston County let contract to H. J. Heikes, to build 4500-lin. ft. concrete retaining wall along Ave. 8 road, also concrete culverts; etc.; cost \$13,000; C. C. Washington, County Engr. (Late-ly noted inviting bids.)

Tex., Groveton—Trinity County will construct 17.44 mi. Highway No. 19; cost \$200,000; W. J. Kelly, County Engr.

Tex., Houston—City plans issuing \$100,000 bonds for street and bridge repairs. Address Mayor Holcombe.

Tex., Jasper—Jasper County will construct 8 mi. 16-ft. gravel road on Highway No. 8; cost \$130,000; Herbert Hargrove, County Judge; C. P. Hunter, County Engr.

Tex., Kingsville—City will pave Kleberg Ave.; rock asphalt and gravel; 18-in. gutters and 10-in. curbs; H. C. Porter, County Engr.

Tex., La Grange—Fayette County will surface 11.27 mi. Highway No. 3; gravel; bids until Nov. 1; J. P. Ehlinger, County Judge. Supersedes recent item. (See Machinery Wanted—Road Construction.)

Tex., Marshall-Harrison County let road contracts as follows: Anderson & Killingsworth, to construct road on Harleton road; Cocke & Turner, to construct road on Elysian Fields. (Late-ly noted inviting bids.)

Tex., Midland—Midland County let contract to Womack Construction Co., Houston, Tex., at \$226,300 to construct 27 mi. road; Job 165-A, Federal Aid Project 235-C. (Late-ly noted inviting bids.)

Tex., Odessa—Ector County let contract to Womack Construction Co., Houston, Tex., at \$230,000 to construct 25 mi. road; Job 69-B, F. A. Project 235-D. (Late-ly noted inviting bids.)

Tex., Palestine—City, A. L. Bowers, Mayor, will construct 80,986 sq. yds. pavement; sheet asphalt, asphaltic composition, rock asphalt and other types; 49,900 lin. ft. curb and gutter; etc.; bids until Oct. 31. (See Machinery Wanted—Paving.)

Tex., Paris—U. S. Dist. Engr., Fort Worth, Tex., approved plans for construction of 4.5 mi. 16-ft. concrete road on Highway No. 5 in Lamar County; cost \$164,187; W. L. Hutchinson, County Judge; W. M. Fooshee, County Engr.

Tex., Port Lavaca—Calhoun County will construct 11.37 mi., 12-ft. shell surface road on Highway No. 7; bids until Oct. 21; changed date from Oct. 4; S. L. Marsh, County Judge; R. H. Phillips, County Engr.

Tex., Rock Springs—Edwards County will grade 3.96 mi. road and build drainage structures; bids opened Oct. 18; A. P. Allison, County Judge.

Tex., Stanton—Martin County let contract to Womack Construction Co., Houston, Tex., at \$105,500 to construct 13 mi. road in Martin County; Job 156-A, F. A. Project 235-B. (Lately noted inviting bids.)

Tex., San Antonio—Bexar County will let contract for 1 in. asphalt surface on Gonzales road from South New Braunfels Ave. to connection with Sulphur Springs road; Augustus McCloskey, County Judge.

Tex., Stanton—U. S. Dist. Engr., Fort Worth, Tex., approved plans for construction of 18.8 mi. Bankhead highway thru Martin County; gravel; cost \$103,804.61; A. G. Odom, County Judge, Stanton; R. W. Baker, County Engr., Big Springs, Tex.

Tex., Tyler—Smith County plans to grade, surface with gravel and pave 22.7 mi. Highway No. 37; cost \$210,000; D. R. Pendleton, County Judge; D. K. Caldwell, County Engr.

Va., East Radford—Baldwin Land Co., W. T. Baldwin, Prest., will develop 225 acres including grading of streets, sewerage, etc.

W. Va., Charleston—State Road Comsn. let contract to Queen Construction Co., Covington, Va., at \$139,000 to grade 8 mi. Webster Springs-Diana road.

W. Va., Charleston—State Road Comsn., Charleston, W. Va., will construct 2.6 mi. Midland Trail between point near Putnam county line and end of paving west of St. Albans including grading, draining and paving with bituminous penetration macadam; Project 3042; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Fairmont—State Road Comsn., Charleston, W. Va., will construct 1.75 mi. Fairmont and Morgantown pike from end of present concrete road to Monongahela county line including grading and draining; Project 3004; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Fayetteville—State Road Comsn., Charleston, W. Va., will construct 6.8 mi. Midland Trail between Longacre and Kanawha Falls including grading and draining; Fayette County, Project 3040; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Glenville—State Road Comsn., Charleston, W. Va., will construct 2 mi. Glenville-Weston pike from end of Project 82-B to Lewis county line including grading and draining; Project 3100; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Keyser—State Road Comsn., Charleston, W. Va., will construct 10.35 mi. Northwestern Turnpike from New Creek to

Hampshire county line including grading and draining; Mineral County, Project 3010; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Lewisburg—Greenbrier County will grade and drain 7½ mi. Blue Sulphur Turnpike from Palestine to Buster's Store at Blue Sulphur Springs; bids until Nov. 1; J. W. Rader, County Engr. (See Machinery Wanted—Road Construction.)

W. Va., Morgantown—State Road Comsn., Charleston, W. Va., will construct 4 mi. Fairmont and Morgantown pike between Little Indian Creek and Marion county line including grading and draining; Project 3003; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Parkersburg—State Road Comsn., Charleston, W. Va., will construct 3 mi. Parkersburg-Williamstown road including grading, draining and paving with concrete; Project 3005; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Webster Springs—Webster County Court let contract to Queen Construction Co., Covington, Va., to grade and drain 8.25 mi. Webster Springs-Diana road; \$150,000 available; Jack W. Hancock, Resident Engr. (Lately noted inviting bids.)

W. Va., Wheeling—State Road Comsn., Charleston, W. Va., will construct 2 mi. National Pike, west of Pennsylvania state line including grading, draining and paving with concrete; Ohio County, Project 3073; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

W. Va., Winfield—State Road Comsn., Charleston, W. Va., will construct 6.6 mi. Midland Trail between end of Project 45 and point near Kanawha county line including grading, draining and paving with bituminous penetration macadam; Project 3001; bids until Nov. 17; E. B. Carskadon, Secy. (See Machinery Wanted—Road Construction.)

Sewer Construction.

Ark., Booneville—City, D. B. Castleberry, Mayor, contemplates installing sewer and water systems.

Ark., Little Rock—City let contract to Moreno-Burkham Construction Co., Southern Trust Bldg., to construct 2100 ft. 12-in. storm sewer; Dickinson & Watkins, Engrs., 610 Boyle Bldg. Lately noted bids opened. (See Road and Street Construction.)

Ky., Hazard—City will install sewer system; vote Nov. 8 on \$50,000 bonds. Address The Mayor.

La., Hammond—City will improve and extend sewer system; voted \$18,000 bonds. Address The Mayor.

Md., Crownsville, P. O. Waterbury—Crownsville State Hospital, Wm. L. Marbury, Prest. Board of Mgrs., 701 Maryland Trust Bldg., Baltimore, Md., will construct sewage disposal plant; bids until Nov. 3. (See Mchy. Wanted—Sewers.)

Mo., Cameron—City let contract to Myers & Peters Construction Co., Quincy, Ill., at \$27,695, to construct sewers in Dist. No 5; W. F. Null, Engr., Cameron. (Lately noted bids opened.)

Mo., Joplin—City, O. P. Mahoney, Commr. of Streets and Public Improvements, will construct Turkey Creek trunk sewer; 1900 ft. 36 and 40-in. concrete tile; also \$35,000 septic tank; S. P. Ashcraft, City Engr.; U. W. Johnston, Supt. Construction. (Lately noted.)

Mo., Sedalia—City will construct sewers

in Dist. No. 11; invites bids. Address The Mayor.

N. C., Rocky Mount—City let contract to L. D. Harper, to extend sewer system; 8 and 10 in. terra cotta piping; cost \$21,394.21; Jno. J. Wells, Civil Engr. (Lately noted inviting bids.)

Okl., Pawnee—City will extend sewer system; sold \$18,000 bonds. Address The Mayor.

S. C., Charleston—City will vote Nov. 8 on bonds for purchasing and establishing sewer system; T. W. Young, Board of Supvrs.

S. C., Walhalla—City, Comsn. of Public Works, Jas. M. Moss, Chrmn., will expend \$35,000 to install sewer system; W. M. Brown, Mayor. (Lately noted.)

Tex., Beaumont—City plans expending approximately \$1,000,000 to construct 3 to 8-ft. concrete sewers; 60x10 to 10x5 ft. county ditches; bids opened about Nov.; R. M. Fulweller, City Engr. Lately noted. (See Mchy. Wanted—Sewers.)

Tex., Jacksboro—City will install sewer system; voted \$65,000 bonds. Address The Mayor.

Telephone Systems.

Fla., Sebring—Mitchell Telephone Co., incptd. with L. L. Morgan, Prest., Willie B. Mitchell, Secy.-Treas.

Tenn., Bradford—J. M. Fisher purchased entire equipment etc. of Home Telephone Co. will repairing lines, etc.

Tex., Pecos—Pecos & Northwestern Telephone Co., Ralph Sparks, Secy.-Treas. and Mgr. contemplate erecting 1 story office building, changing from magneto to common battery equipment, also build about 25 mi. rural lines; let contract to Kellogg Switchboard & Supply Co. for cut over material.

Va., Lowesville—L. V. Parr, Propr. of Amherst Telephone Co., Amherst, Va., and others interested in establishing telephone lines in vicinities of Sandidges and Lowesville with Amherst and Lynchburg.

W. Va., Lansing—Mountain Cove Telephone Co. increase capital to \$24,990, also changed name from Lansing Telephone Co.

Textile Mills.

N. C., Thomasville—Yarn—Amazon Cotton Mills, C. G. Hill, Secy., plans doubling capacity; will erect additional building.

Va., Galax—Hosiery—Paul Knitting Mills, Thos. J. Wallner, Gen. Mgr., Pulaski, Va., plans reconstructing brick and steel sash building; install 100 to 200 machines; 30-H. P. electric power; daily capacity 500 doz. pairs.

Va., Marion—Hosiery—Paul Knitting Mills, Thos. J. Wallner, Gen. Mgr., Pulaski, Va., will establish branch plant at Marion, Wytheville or Galax, Va.; plans reconstructing brick and steel sash building; install 100 to 200 machines; 30-H. P. electric power; daily capacity 500 doz. pairs. (Lately noted contemplated establishing branch plant.)

Va., Wytheville—Hosiery—Paul Knitting Mills, Thos. J. Wallner, Gen. Mgr., Pulaski, Va., plans reconstructing brick and steel sash building; install 100 to 200 machines; 30-H. P. electric power; daily capacity 500 doz. pairs. (Lately noted contemplated establishing plant.)

Water-Works.

Ala., Anniston—Alabama Water Co., Jno. B. Weakley, Prest., Albany, Ala., will improve water-works, including reservoirs, etc.

Ala., Montgomery—State Board of Control and Economy of Alabama, will install complete water supply system in State Penitentiary at Kilby, Ala.; including well to supply 400 U. S. gals. water per min., pump and necessary machinery and equipment; bids until Nov. 10. (See Machinery Wanted—Water-Works.)

Ark., Booneville—City, D. B. Castleberry, Mayor, contemplates installing water and sewer system; plans sinking 2 deep wells.

Fla., Miami—City, Mr. Coe, Mgr., let contract to C. H. Perry to dig well and install pneumatic water system at city incinerator site.

Fla., Tampa—City, A. W. D. Hall, City Mgr., plans purchasing Tampa Water-Works Co.

Ky., Ashland—City will expend \$160,000 to extend water-works; construct 2,500,000-gal. capacity filter plant; 600,000-gal. capacity reservoir; install centrifugal pump; bids opened; Alvord & Burdick, Engrs., Hartford Bldg., Chicago, Ill.; plans laying pipes. (See Machinery Wanted—Water-Works.)

Ky., Hazard — City will install water-works; vote Nov. 8 on \$75,000 bonds. Address The Mayor.

La., Hammond—City will extend and improve water-works; voted bonds. Address The Mayor.

Md., Brunswick—City will erect 3,000,000-gal. capacity concrete construction reservoir; 200x12 ft. deep; built 12 ft. above level of ground; Emory C. Crum, City Engr., Frederick, Md.

Mo., Poplar Bluff—City will repair and extend water mains; expend \$15,000 on improvements. Address The Mayor.

N. C., Boone—Appalachian Training School let contract to Boyd, Higgins & Gaforth, Charlotte, N. C., to construct water system; erect 250,000-gal. capacity tank.

N. C., Red Springs—Town will issue \$50,000 water and electric light bonds; Hiram Grantham, Mayor.

Okla., Enid—City, R. T. Williams, Clk., will extend water-works; voted \$60,000 bonds. (Lately noted to vote.)

S. C., Seneca—City, B. A. Lowry, Mayor, let contract to J. B. McCrary Construction Co., Atlanta, Ga., to construct 2,500,000-gal. capacity reservoir, and complete filtering station; H. S. Jaudans Engineering Co., Engr., Elberton, Ga.; Eugene T. Gilbert, Res. Engr. Seneca.

S. C., Walhalla—City, Comsn. of Public Works, Jas. M. Moss, Chrmn., will expend \$90,000 to install water-works; W. M. Brown, Mayor. (Lately noted.)

Tenn., Nashville—City, Felix Z. Wilson, Mayor, will extend and improve water-works; vote Nov. 17 on \$1,800,000 bonds. (Lately noted.)

Tex., Big Spring—City let contract for improvements to water works system; increasing capacity from 600,000 to 1,500,000 gals. Address The Mayor.

Tex., Cleburne—City, J. W. Hockday, Supt. Water Dept., contemplates installing new water-works; plans expending about \$200,000 to construct dam; 2,000,000,000-gals. daily capacity; Burns & McDonnell, Engrs., Kansas City, Mo. (Lately noted plans improving.)

Tex., Edinburg—City, A. J. Ross, Mayor, will construct water and electric light plants; bids opened; H. E. Wilcox, City Engr. (See Mch. Wanted—Water-Works.)

Tex., Jacksboro—City will extend water-works; voted \$5,000 bonds. Address The Mayor.

Tex., Wichita Falls — Wichita County

Water Improvement Dist. No. 1, F. M. Lawton, Gen. Mgr., Morgan Bldg., will construct reservoir and canal system, consisting of earth dam, outlet works, spillway, etc., diversion dam with concrete overflow, levee with outlet gates, and irrigation distributing system; 1,400,000 cu. yds. earth embankment; 300,000 cu. yds. earth levee, etc.; place flumes, gates, etc.; bids until Nov. 15. (See Machinery Wanted—Water-Works.)

Va., Tenn.—Bristol—Cities let contract to Norton Bird and Whitman, Engrs., Munsey Bldg., Baltimore, Md., to improve water system, including filtration, pumping, pipe lines, and enlargement of reservoir capacity; S. G. Keller, City Mgr., Bristol, Va., and G. P. Biedleman, Commr. of Public Improvements, Bristol, Tenn.

W. Va., Elkins — City, H. G. Kump, Mayor, will improve water-works; let contract to Concrete Steel Bridge Co., Clarksburg, W. Va., at \$57,135, to furnish and install pumping and filtration plant; to New York Continental Jewel Co., Nutley, N. J., at \$18,100, for filter and piping equipment; Dravo-Doyle Co., Pittsburgh, Pa., at \$9,471, for pumps, motors, electrical equipment, and DeLaval pumps; Frank Hamer & Co., Elkins, W. Va., at \$4,965, for additions to reservoir; Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa., at \$6,418, to lay water mains; United States Cast Iron Pipe Co., Pittsburgh, Pa., at \$6,739.35, for cast iron pipe and specials; Ludlow Valve Co., Pittsburgh, Pa., for hydrants, and Rennselaer Valve Co., Pittsburgh, Pa., for valves; total cost \$1,087.15; B. Kress, Engr., 8 and 9 Fair Bldg. (Lately noted bids until Oct. 7.)

Woodworking Plants.

Ark., Fort Smith—Truck Bodies—Fort Smith Body Co., capital \$100,000, inceptd. with Ben B. Johnson, Prest.-Mgr.; I. K. Nakdimen, Secy.-Treas.; purchased all assets of Johnson Commercial Body Co.

Fla., Jacksonville — Sash and Doors — Jacksonville Sash & Door Co. will occupy 100x105 ft. 2 story building, brick construction, estimated cost \$25,000 erected by Hal-sena Investment Co.

Fla., Palmetto—Furniture—Snyder Furniture Co., C. F. Snyder, Propr. plans erecting 2 story, 100x100-ft. building, interlocking tile and brick construction.

Tenn., Nashville—Sash and Doors—Nashville Sash & Door Co., capital \$40,000, inceptd. by S. J. Evans, Jr., O. C. Staley and Thomas S. Davis.

Tenn., Nashville—Motor Bodies—Southern Motor Body Co., capital \$250,000, inceptd. by Lawrence Baumann and Jos. A. Boyd.

Tenn., Dyersburg — Cooperage — Monarch Cooperage Co., J. P. Gibson, Mgr., will rebuild plant burned at loss of \$10,000.

Tex., Dallas—Furniture—L. L. Davis and others will establish furniture factory, install mch.; purchased building.

Fire Damage.

Ala., Anniston—National Forge Co. plant; loss \$40,000.

Ala., Birmingham—Alabama State Training School for Girls' main building.

Ala., Lapine—Hancock & Athey, Naftel Bros., Ruff & Co., J. H. Stowers' buildings.

Ark., Fort Smith—Osage Cotton Oil Co.'s plant, S. 6th St.; loss \$100,000.

Ark., Little Rock—City Garbage and Street Cleaning Department building; loss \$25,000. Address The Mayor.

Ark., Paragould—Independent Gln Co.'s warehouse.

Fla., Vero—Redstone Lumber & Supply Co.'s yards.

Ga., Athens—Dr. A. M. Soule's residence on Milledge Ave.

Ga., Cohutta—Hopewell Baptist Church, 5 mi. from Cohutta. Address The Pastor.

Ga., Covington—L. P. Loyd's store.

Ga., Davisboro—Page Hotel; loss \$25,000. Address The Proprietor.

Ga., Louisville—City light and water plant, Mr. Cox, Supt.; loss \$20,000.

La., Estherwood—Allen C. Hoffpaur's bakery; loss \$1,000.

Ga., Macon—Jessee B. Hart's cotton warehouse occupied by J. J. Williamson & Co.

Ga., Madison—L. T. Penick's warehouse.

Ga., Pavo—Potato warehouse of Pidcock & Roddenberry, Moultrie.

Ky., Heller—R. I. McClure, Joel & Harrett, Cohen & Stryk and Harrett Ratliffe's stores; Mrs. Martha Ratliffe and Flem Childers' residences.

Ky., Heller—Chesapeake & Ohio Ry. Co.'s depot; F. I. Cabell, Ch. Engr., Richmond, Va.

La., Monroe—Milner Motor Co.'s automobile building; loss between \$75,000 and \$80,000.

La., Rose Hill, P. O. Chamberlain—People's Sugar Refinery; loss \$300,000.

Md., Baltimore — Satin Candy Co. and Monumental Shoe Mfg. Co.'s plants, 426 E. Saratoga St.

Miss., Greenville — P. H. Stovall's residence; loss \$7,000.

Miss., Hazelhurst—B. R. Price's cotton ginnyery; loss \$6,000.

Mo., Kansas City — Globe Wrecking & Lumber Co., Bell Coal Co., and Foley Plumbing Co.'s plants; total loss \$28,000.

Mo., Versailles—Public School; loss \$20,000. Address Board of Education.

N. C., Charlotte — Alexander Garsed's foundry and machine shop.

N. C., Laurinburg—A. L. McKinzle, Sr.'s 3 barns and ginnyery.

N. C., Salisbury—H. J. Earnhardt's and D. C. Carter's residences on N. Lee St.

Okla., Anadarko—Mills Brothers' mill & elevator, H. T. Mills, Mgr.; loss \$12,000.

Okla., Chickasha—A. E. Andrews' residence.

S. C., Charleston — Charleston Terminal Co.'s warehouses and wharves.

S. C., Fountain Inn—D. D. Owings' residence, nr. Fountain Inn.

S. C., Lake City—Bartell Bros.' cotton, gin, lumber, grist and saw mill.

S. C., St. Matthews—J. W. Murph's cotton ginnyery in Wesley Chapel section; loss \$15,000.

S. C., Pageland—Laney—Crow Gln Co.'s plant; loss \$8,500.

S. C., Privateer, P. O. Sumter—Jos. Kolb's ginnyery and saw mill.

S. C., Ridgeway—A. C. Hood's warehouse.

S. C., Rock Hill—T. L. Johnston's cotton warehouse.

Tenn., Carthage—N. V. West's residence and the Baptist Church; loss \$7,000; address The Pastor.

Tenn., Dyersburg — Monarch Cooperage Co.'s plant; loss \$10,000.

Tenn., Memphis — Alexander Brothers' lumber mill; loss \$50,000.

Tenn., Ripley—A. D. Jenkins' residence on Brownsville St.; loss \$10,000.

Tex., Athens—Collins Building occupied

by E. A. Carroll's hardware store, telephone exchange, etc.; loss \$20,000.

Tex., Bronson—J. L. Phelps saw mill; loss \$10,000.

Tex., Beaumont—Magnolia Petroleum Co.'s high pressure still; loss \$175,000.

Tex., Breckenridge—Bass Petroleum Corp.'s employees' dwellings and field office; loss \$15,000.

Tex., Dallas—Rose-Wilson Motor Co.'s plant; loss \$90,000.

Tex., Dallas—Trinity Cotton Oil Co.'s shed in South Dallas.

Tex., Decatur—San La Roy Confectionery; Donald & Greer, Donald McNash Dry Goods' stores.

Tex., Danison—Dan Dane's residence; loss \$8,000.

Tex., Eastland—Whittington Sanitarium, owned by M. H. Hagman, Ranger; loss \$40,000.

Tex., Elliasville—Guaranty State Bank, post office and 24 other buildings; loss \$500,000.

Tex., Fort Worth—Fort Worth Gin & Warehouse Co.'s plant.

Tex., Gainesville—A. Cato's and Walter Hudgins' residences; Mrs. M. Z. Honeycutt's residence damaged; loss \$15,000.

Tex., Lockney—Highway Garage; loss \$40,000.

Tex., McKinney—White & Wilson's cotton ginnery; loss \$20,000.

Tex., Paris—Rodgers-Wade Building; Southwestern Telephone Co.'s offices; Rodgers-Wade Co.'s 3 stores on Grand Ave.; Hicks & Hackle's store; Paris Hardware Co.'s store.

Tex., South Bend—Young County Furniture & Hardware Co.'s building, also 26 other buildings; loss \$500,000.

Tex., Uvalde—Homer Hardware's Co.'s store.

Va., Charlottesville—T. W. Dexter's residence and tea house on Rio Rd.

Tex., Thorndale—Steve Reiger's residence; loss \$5,000 to \$8,000.

Tex., Weslaco—Livingston Lumber Co's yards.

Va., Norfolk—Chalfonte Cottage, owned by Mrs. H. L. Gray, loss \$50,000; Questover Club and Tipperary Cottage owned by M. K. McCluskey, loss \$10,000 and \$4,000; Dalby Cottage, loss \$30,000; B. Baydush's cottage, loss \$10,000; all structures at Willoughby.

Va., Ocean View—W. M. Hanna's 5 cottages, and Geo. Benzle's cottage; loss \$55,000.

W. Va., Beckley—Beckley Wizard Baking Co., Kanawha St.; loss \$15,000.

W. Va., Mayberry—Mayberry High School; loss \$60,000. Address Board of Education.

Damaged by Explosion.

Tex., Burkburnett—Tidal Western Oil Refining plant.

Ga., Augusta—Marion Building Co., H. H. Saxon, Agent, will remodel 10-story office building damaged by fire; G. Lloyd Preacher, Archt.

N. C., Cleveland—Cleveland Bank & Trust Co., J. J. Lattimore, Cashr., will remodel building at Lafayette and Marion Sts., for bank; exterior stuccoed with marble dust finish; Italian and Tennessee marble flooring; bronze grill work and fixtures; reinforced concrete and hollow tile vault.

N. C., Concord—Citizens Bank & Trust Co., A. F. Goodman, Cashr., plans to erect building.

N. C., North Wilkesboro—Bank of North Wilkesboro purchased property at B and 9th Sts. and plans to erect 2-story building.

Churches.

Ark., Charleston—Baptist Church plans to erect building. Address The Pastor.

D. C., Washington—Epiphany Church, G St., between 13th and 14th Sts., will expend \$35,000 to remodel building. Address The Rector.

Fla., Apopka—Methodist Church will erect building on Park Ave. Address The Pastor.

N. C., Charlotte—First Baptist Church, Rev. Dr. Luther Little, Pastor, plans to erect \$60,000 Sunday school addition; 4 stories; brick.

N. C., Charlotte—First Baptist Church plans to erect \$60,000 Sunday school building. Address The Pastor.

S. C., Rock Hill—St. Johns M. E. Church, South, plans to erect building at Oakland and E. White Sts. Address The Pastor.

Tenn., Nashville—Holy Name Catholic Church, Rev. E. Gazzo, Pastor, will erect \$15,000 addition to building at 6th and Main Sts.

Tex., El Paso—B'nai Zion congregation, E. Klein, Treas., plans to erect \$50,000 synagogue on Mesa Ave.; brick; oak interior; seat 1500.

W. Va., Bluefield—John Stewart Memorial M. E. Church will erect building; Alex. B. Mahood, Archt.

City and County.

Fla., Miami—Comfort Stations—City, Col. Coe, City Mgr., plans to erect 4 comfort stations.

Ky., Hazard—City Hall—City will vote in November on bonds, including \$25,000 for city hall. Address The Mayor.

La., Shreveport—Comfort Station—Police Jury, M. A. Dickson, Chrmn. Comm., plans to erect \$10,000 comfort station.

Mo., Jackson—County Farm—Cape Girardeau County will vote in January on bonds to erect buildings at county farm. Address County Commrs.

Okla., Enid—Convention Hall—City voted \$275,000 bonds including \$215,000 to complete convention hall. Address The Mayor.

Tex., San Antonio—Fire Station—City will erect \$50,000 fire station at Nacogdoches and Crockett Sts.; address Commissioner Wright.

Va., Portsmouth—Jail—City, J. P. Jervey, City Mgr., will erect jail building; 42x62 ft.; brick and concrete; concrete and gravel and slag roof; concrete and tile floors; metal doors; ventilators; Pauly Jail Co., St. Louis, Mo., and M. L. Parker, Portsmouth, Archts.; Jones-Speer Co., Portsmouth, low bidder at \$37,341. (Lately noted.)

W. Va., Clarksburg—Fire Department, etc.—City is considering remodeling Colonial building on W. Pike St. for fire department.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

Fla., St. Petersburg—S. C. Goff, Ocean City, N. J., will erect apartment house at 16th Ave., South, and 1st St.; 4 suites.

Mo., Kansas City—McCanless-Miller Realty Co. will erect 5 apartment houses at 2700-2, 2704-6, 208-10 Benton Blvd. and 2657-59, 2661-63 E. 27th St.; 3 stories; brick; cost \$20,000 each.

Okla., Oklahoma City—C. M. Cooper will erect \$16,000 apartment house at 128-30 E. 16th St.; brick.

Okla., Tulsa—J. D. Simmons will erect \$15,000 apartment house; 32x61 ft.; frame and brick veneer; shingle roof; oak and concrete floors; gas heat; city lights; plaster board; interior tile; plans and construction by owner. (Lately noted.)

Association and Fraternal.

D. C., Washington—Scottish Rite Masons, John C. Wineman, Chrmn., Monie Sanger, Secy., Bldg. Comm., 3d and E Sts., N. W., will erect cathedral; 100x150 ft.; Greek Doric design; Howard Cutler, Archt., 13th and H Sts., N. W. (Previously noted.)

Ga., Macon—Grand Lodge of Georgia, F. & A. M., Frank F. Baker, Grand Secy., will erect temple at New and Mulberry Sts.; Frank Happ, of Happ & Shelverton, Archt.

Ga., Wadley—Ancient Free and Accepted Masons will erect 3-story building; Scroggs & Ewing, Archts., Augusta.

Okla., Oklahoma City—Masonic Temple Bldg. Assn. will erect temple; cost not to exceed \$900,000; 135x250 ft.; steel and reinforced concrete; Barrett specification and promenade tile roof; marble, concrete, ceramic tile and hardwood floors; electric forced ventilation air ducts; city lights; hollow

fireproof tile; plaster board; safes; interior tile; metal doors; vaults; wire glass; steel sash and trim; Layton, Smith, Forsythe & Co., Archts.; bids opened about Nov. 15 to 22. Address L. H. Swan, Masonic Temple Bldg. (Previously noted.)

Okla., Tulsa—Young Women's Christian Association will remodel building.

Tenn., Nashville—Salvation Army will erect \$60,000 building at 4th and Commerce Sts.; brick and reinforced concrete; 5 stories; 57x184 ft.; bids received until Oct. 29 at office of C. K. Colley, Archt., Fourth and First Natl. Bank Bldg.

Va., Clifton Forge—Young Men's Christian Association will erect \$100,000 building; 3 stories; reinforced concrete; swimming pool, gymnasium, dormitory rooms, plumbing, heating and lighting equipment and furniture; plans and specifications made, but held up on account of change of site; Jallade, Lindsay & Warren, Archts., 129 Lexington Ave., New York. (Lately noted.)

Bank and Office.

Ga., Atlanta—International Proprietaries, Inc., G. F. Willis, Prest., P. C. McDuffie, V.-P., will erect \$80,000 office building at Luckie and Cone Sts.; 3 stories and basement; foundation to carry 4 additional stories; 60x100 ft.; fireproof; brick and ornamental terra cotta; reinforced concrete columns and floors; French casement windows; electric elevator; A. Ten Eyck Brown, Archt.; bids opened about Nov. 10.

Ga., Atlanta—Dr. Troy Bivens will expend \$40,000 to convert building at Edgewood, Ivy and Gilmer Sts., into office building; 3 stories; stores on first floor; 30 offices above; concrete blocks; A. Ten Eyck Brown, Archt.

police department and municipal offices. Address The Mayor.

Dwellings.

Ala., Tuscaloosa—J. T. Horne will erect \$16,000 residence lately noted; 8 rooms; 38x42 ft.; brick veneer; tile roof; hardwood floors; hot water heat; interior tile; Wm. Leslie Welton, Archt., American Trust & Saving Bank Bldg., Birmingham. (See Machinery Wanted—Brick; Roofing (tile).)

D. C., Washington—Boss & Phelps will erect 2 dwellings at 3928-30 Morrison St., N. W.; cost \$20,000.

D. C., Washington—L. E. Breuninger & Sons, Colorado Bldg., will erect 7 dwellings; cost \$14,000 each; 24x54 ft.; brick and stone; slag and tile roofs; oak floors; hot water heat; electric lights; day labor.

D. C., Washington—D. J. Dunigan will erect 10 dwellings at 302-20 Upshur St., N. W.; cost \$80,000.

D. C., Washington—B. H. Gruver will erect 6 dwellings at 4315-25 New Hampshire Ave., N. W.; cost \$50,000.

D. C., Washington—H. A. Kite will erect 6 dwellings at 3812-22 Albemarle St.; cost \$42,000.

D. C., Washington—T. R. Riley will erect 5 dwellings at 3515-23 T St., N. W.; cost \$20,000.

D. C., Washington—R. H. Sanford will erect 6 dwellings at 4600-10 Ninth St., N. W.; cost \$30,000.

D. C., Washington—E. B. Scribner will erect 5 dwellings at 907-15 Crittenden St., N. W.; cost \$32,000.

Fla., Lake Wales—Irwin A. Yarnell will erect 12 or 15 dwellings in club house grounds, Highland Park; cost \$5000 to \$20,000 each. (Lately noted.)

La., New Orleans—S. Ohnstein will erect \$15,000 residence at 25 Newcomb Blvd.; N. Coleman, Archt.; construction by owner.

Mo., Kansas City—B. Tanhoff will erect 2 dwellings at 5636-38 Rockhill Rd.; cost \$10,000.

Fla., West Palm Beach—Dr. McCreery, of Speer's Pharmacy, Inc., purchased property at Sunrise Ave. and Dixie Highway and plans to erect residence.

Ga., Millen—W. R. Turner will erect semi-colonial residence; Scroggs & Ewing, Archts., Augusta.

Ky., Frankfort—State Board of Charities and Corrections, J. P. Byers, Comsgr. of Public Institutions, will erect gardener's cottage at State institution for Feeble-Minded; bids received until Oct. 29 at office of Nevin, Wischmeyer & Morgan, Archts., 1317 Starks Bldg., Louisville.

La., New Orleans—A. C. Williamson and Henry Cucullu will erect 5 dwellings; ultimate plans provide for number of dwellings.

Md., Baltimore—Walter Koch, 2900 Springhill Ave., will erect 17 dwellings at Towanda and Springhill Aves.; 22x33 ft.; brick; slag roof; oak, wood block and concrete floors; steam heat; electric lights; hollow fireproof tile; interior tile; plans and construction by owner. (Lately noted.)

Mo., Kansas City—Earl C. Haller Const. Co. will erect 2 frame dwellings at 4926 Holly St. and 4937 Mercer St.; cost \$12,000.

Mo., Kansas City—Wells Bros. Realty Co. will erect \$5000 residence at 233 W. 61st St. and 5 dwellings at 3300-10 Askew Ave.; cost \$3000 each.

Mo., Kansas City—W. V. Becker will erect 8 dwellings at 7300, 1, 6, 10, 11, 17, 22 and 21 Wyoming St.; cost \$32,000.

Mo., Kansas City—Geo. Fuller Green will erect 9 dwellings; cost \$26,500.

Mo., Kansas City—E. C. Hallar will erect 3 dwellings at 4100, 4 and 8 E. 11th St.; cost \$12,000.

Mo., Kansas City—Zurn Building Co. will erect 6 dwellings at 5501, 23, 27, 31, 35 and 39 Charlotte St.; cost \$5000 each.

Mo., St. Louis—Christian Stocke, Prest. of Anderson-Stocke-Buermann Realty Co. purchased property on Cecil Ave., nr. University Lane, Skinker Heights, and plans to erect residence.

N. C., Wilmington—Home Realty Co., Chas. B. Parmele, Prest., plans to erect 10 bungalows in connection with development.

Okla., Oklahoma City—Campbell & Price will erect 2 dwellings at 627 and 641 E. 15th St.; brick; cost \$20,000.

Okla., Oklahoma City—E. C. Ross will erect 2 residences and garages at 338 and 344 W. 34th St.; frame; cost \$10,000.

Tenn., Memphis—E. C. Gause will erect \$10,000 residence at 420 Stonewall Pl.; white clapboards; colonial design; Mahon & Broadwell, Archts.

Tenn., Memphis—J. R. Klyce will erect 2 five-room dwellings at 250 and 256 Angelus St.; cost \$7300 each; hot water heat, \$500 each.

Tenn., Memphis—Autumn Improvement Co. will erect number of dwellings in connection with development; 2 stories; brick veneer; tile roofs; cost \$25,000 to \$30,000 each; Mahon & Broadwell, Archts.

Tenn., Memphis—H. H. Higbee will erect \$11,000 residence at 2215 S. Parkway.

Tenn., Memphis—C. A. Bruce will erect \$14,000 residence on Forrest Ave., nr. Evergreen; colonial design; Mahon & Broadwell, Archts.

Tenn., Memphis—E. H. Cannon will erect \$18,000 residence on South Parkway, East, nr. Cooper St.; 2 stories; brick veneer; Mahon & Broadwell, Archts.; construction begun.

Tenn., Memphis—W. T. Stark is erecting \$11,000 residence on North Parkway, nr. McLean Blvd.; brick veneer; Mahon & Broadwell, Archts.

Tenn., Nashville—Mrs. J. Ivy Underwood will erect \$10,000 residence at Fairfax and West End Sts.; 8 rooms; stone.

Tenn., Rogersville—Kitzmiller-Scott Mill Co. plans to erect 25 employees' dwellings.

Tex., Fort Worth—C. S. Johns will erect \$13,000 residence on Berkeley Pl.

Va., Richmond—A. K. Bowles will erect \$10,000 residence at 143 Colonial Ave.; brick.

Va., Richmond—Mrs. Effie Parrish will erect \$10,000 brick residence at 3307 Stuart Ave.

Va., Richmond—M. W. Strother will erect \$12,000 residence at 3708 Chamberlayne Ave.; brick.

Va., Richmond—John W. Williams will erect 3 dwellings at 4, 6 and 8 North Boulevard; 3 stories; brick; cost \$40,000.

Va., Roanoke—R. L. Sharper will erect \$15,000 residence at Grandin Rd. and Otterview St.; 2 stories; brick.

W. Va., Bluefield—Judge Frank J. Maynard will erect residence on Memorial Ave.; Martin Garry and Robert Sheffey, Archts.

W. Va., Princeton—Kelly W. McCaugherty will erect brick residence on S. Walker St.

Government and State.

Md., Baltimore—Post Office—Treasury

Dept., Jas. A. Wetmore, Acting Suprv. Archt., Washington, D. C., will receive bids until Nov. 7 to construct mezzanine floor in Post Office; drawings and specifications from Custodian of site or office of Suprv. Archt., Washington.

Md., Baltimore—Memorial Building—State Memorial Comsn., Comptroller E. Brooke Lee, Chrmn., Annapolis, and City Memorial Comsn., Harry C. Jones, Chrmn., Chamber of Commerce Bldg., Baltimore, will erect soldiers' memorial building on square between Lexington, Gay, Fayette Sts. and Fallsaway; cost \$1,000,000; Grecian-Doric architecture; main floor, auditorium; offices and assembly hall in basement; Lawrence Hall Fowler, Archt., 347 N. Charles St.; Waddy B. Wood, Washington, Consulting Archt. (Previously noted.)

Hospitals, Sanitariums, Etc.

Ark., Blytheville—Chamber of Commerce is promoting establishment of hospital; considering erecting addition to and improving building for hospital; Rev. Gustave Orth, Chrmn. of Comm.

Ark., Fort Smith—Sebastian County Hospital, J. C. Bryant, Supt., is erecting 2-story brick addition on Grand Ave.; construction begun.

Ark., North Little Rock—Treasury Dept., Jas. A. Wetmore, Acting Suprv. Archt., Washington, D. C., will receive bids until Nov. 10 to construct kitchen and mess hall at U. S. Public Health Service Hospital at Fort Logan H. Roots; drawings and specifications from Supt. of Construction at Fort Logan H. Roots or from office of Suprv. Archt., Washington.

Md., Baltimore—Johns Hopkins Hospital, Dr. Winford H. Smith, Supt., will erect dispensary building for Harriet Lane Home; 1 story; 30x52 ft.; brick and limestone; slag roof on concrete; cement or terrazzo floors; heating not in general contract; Archer & Allen, Archts., Central Savings Bank Bldg.; bids received until Oct. 24; following contractors estimating: B. F. Bennett Bldg. Co., 123 S. Howard St.; Willard E. Harn Co., Inc., 2314 Oak St.; Gladfelter & Chambers, 36th St. and Roland Ave.; Hicks, Tase & Norris, Inc., 106 W. Madison St.; G. Walter Tovel, Eutaw and McCulloch Sts.; Fraine Bros., & Haigley, 18 Clay St.; Morrow Bros., Fidelity Bldg.

Mo., Farmington—State will erect buildings at Farmington Hospital; Dr. E. E. Bruner, Supt.; H. H. Hohenshield, Archt., Navarre Bldg., St. Louis. (Previously noted.)

Mo., Fulton—State will erect building at Fulton Hospital; Dr. M. O. Biggs, Supt.; M. F. Bell, Archt.

Mo., Mount Vernon—State will erect buildings at Mt. Vernon Tuberculosis Sanitarium; Dr. J. W. Bruton, Supt.; H. H. Hohenshield, Archt., Navarre Bldg., St. Louis. (Previously noted.)

N. C., Brevard—Riverside Sanitarium at Dunns Rock township plans to erect building.

Hotels.

Fla., Miami—Florida Hotel Construction & Operating Co., J. K. Leaming, Indianapolis, Ind., Prest.; W. T. Regar, V.-P. and T. O. O'Neal, Secy.-Treas., will incorporate with \$500,000 capital stock; plans to erect 5-story and basement hotel at 3rd Ave. and 1st St.; 100 rooms with private bath; fireproof; reinforced concrete and tile; cafe and 6 stores on first floor; bungalow on roof.

Fla., St. Petersburg—L. H. Miller will

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

erect hotel on Third Ave., between Fifth and Sixth Sts.; 25 guest rooms.

Ga., Dalton—Civitan Club Hotel Comm., H. J. Smith, Chrmn., has tentative plans for 4-story hotel; 50 to 60 rooms each with private bath; fireproof; concrete; provision for store rooms; cost \$80,000; Eugene Camp, Archt. (Previously noted.)

Mo., Cape Girardeau—O. A. Harbin, Pig-gott, Ark., is reported to remodel St. Francis Hospital for hotel and apartments.

Tex., Currie—W. T. Pittman, Dallas, will erect 40-room brick hotel.

Tex., Teague—Elizabeth Brown will re-model and probably erect additional story to Youkum Hotel.

Miscellaneous.

Fla., Captiva—Clubhouse—Frank Tichenor, Fort Myers, representative, will erect clubhouse and several cottages on Captiva Island.

Fla., Miami—Amusement Park—Herbert H. Pattee will construct amusement park.

Fla., Orlando—Resort—H. H. Lewis will establish resort; dance hall, dining room, bathing pier and tea garden; cost \$20,000.

Tex., Dallas—Fair—State Fair of Texas Assn. will expend \$50,000 for improvements.

Ky., Louisville—Resort—W. F. Woodruff and Herman Glassford will erect \$50,000 pleasure resort and inn on Ohio River nr. Westfield Station, Upper River Rd.; 82x62 ft.; concrete; bathing beach half mile long; also erect several residences and garage.

Railway Stations, Sheds, Etc.

W. Va., Huntington—Chesapeake & Ohio Ry. Co., F. I. Cabell, Ch. Engr., Richmond, Va., will erect steel shed and platform; each 50x500 ft.; also construct 4 tracks; each about 1700 ft. long.

Schools.

Ala., Bessemer—City Board of Education will erect 4-room addition to Vance School.

Ala., Birmingham—Jefferson County Board of Education, Dr. N. A. Baker, Supt., will erect school at Bessie; frame; cost \$14,000; also 4-room school at McDonald's.

Ala., Birmingham—Alabama State Training School for Girls will erect building to replace structure noted burned.

Ala., Mobile—Mobile County Board of Education will erect school at Hickory Grove to replace burned structure.

Ala., Pike Road—Montgomery County Board of Education, A. F. Harman, Supt., Montgomery, will receive bids until Oct. 31 to erect brick addition to school; plans and specifications at office Okel & Cooper, Archts., Vandiver Bldg., Montgomery. (Previously noted.)

Fla., Fort Lauderdale—Board of Public Instruction will erect school.

Fla., Newberry—Newberry Special Tax School Dist. No. 73 will erect 10-room and auditorium high school; steam heat; cost \$30,000; T. M. Bryan, Archt., Gainesville; plans ready Nov. 15.

Fla., Waldo—Walnut Special Tax School Dist. No. 24 will erect 2-story high school; Spanish type; T. M. Bryan, Archt., Gainesville; plans ready.

Ga., Atlanta—Atlanta Graduate School of Physicians and Surgeons organized with \$250,000 capital; Dr. W. P. Nicholson, Sr., Dean, Dr. Leroy Childs, Prest.; Dr. Frank Eskridge, Secy.-Treas.; will erect \$150,000 building at Butler and Armstrong Sts.; 4 stories; 50x150 ft.; fireproof; Eugene C. Wachendorff, Archt.

Ga., Carrollton—City will erect \$80,000 school; 2 stories; brick and joist construction; tar and gravel roof; maple floors; 2-pipe gravity steam heat; bids opened Oct. 21; separate bids for heating; Hentz, Reid & Adler, Archts., Atlanta. Address A. K. Sneed, Mayor, Carrollton. (Lately noted.)

Ga., Millen—Board of Education will erect high school; cost \$30,000; Scroggs & Ewing, Archts., Augusta.

Ga., Ochlochnee—Consolidated School Board called election Nov. 12 on \$25,000 bonds to erect school.

Ky., Richmond—City Board of Education, J. Howard Payne, Clerk, will erect 20-room high school; 2 or 3 stories; brick; C. C. & E. A. Weber, Archts., Miller Bldg., Cincinnati, O.; bids opened Oct. 24. (Lately noted.)

La., New Orleans—City School Board will erect 16-room schools at Orleans St. and City Park Ave., Carrollton Ave. and Apricot St., General Pershing and Galvez Sts., Arts and Robertson Sts.; also 14-room school at Broadway and St. Ann St.; all structures include manual training, domestic science and art departments; cost \$1,000,000; E. A. Christy, City Archt.

Md., Baltimore—Johns Hopkins University, Dr. Frank J. Goodnow, Prest., opened bids to erect first unit of 4 dormitories at Homewood; 232x131 ft.; 3 stories and basement; Colonial type; brick; dining room, commons room, sleeping rooms, etc.; accommodate 140 students; Edw. J. Palmer, Jr., Archt., 513 N. Charles St.; Frainie Bros. & Haigley, 18 Clay St., low bidders at \$366,897. (Lately noted.)

Md., Baltimore—Johns Hopkins University, Dr. Frank J. Goodnow, Prest., will erect School of Hygiene and Public Health at Wolfe and Monument Sts.; cost \$500,000; Archer & Allen, Archts., Central Savings Bank Bldg. (Previously noted.)

Md., Cumberland—Board of Education, W. F. Sperry, Prest., will erect addition to grade school at Johnson Heights; 1 story and basement; 200x200 ft.; brick and stone; Holmboe & Pogue, Archts., 653 Empire Bank Bldg., Clarksburg, W. Va.

Mo., Columbia—Stephens College will erect science hall; cost \$150,000.

Miss., Johnston Station—Lincoln County Board of Supervisors, Brookhaven, called election Nov. 5 on school bonds.

Mo., Kansas City—Helping Hand Institute, Russell F. Greiner, in charge, Grand and Missouri Aves., will erect \$40,000 addition; C. A. Smith, Archt.

N. C., Charlotte—Board of Education will erect additions to Dilworth and Third Ward schools; 4 class rooms and auditorium.

N. C., Greensboro—City School Board will expend \$800,000 to erect 6 buildings; brick; fireproof walls and floors; Starrett & Van Vleck, Consit. Archts., 8 W. 40th St., New York.

N. C., Raleigh—Building Committee, State School for Blind, R. S. Busbee, Chrmn., will receive bids at office G. E. Lineberry, Supt., until Oct. 25 to erect superintendent's residence, addition to administration building, 3 cottages, boiler house and laundry building; also tunnels connecting buildings; work includes furnishing labor, material and equipment; plans and specifications at offices Mr. Lineberry, and Jas. A. Salter, Archt., Raleigh; contractors estimating are: J. A. Jones Construction Co. and Goode Construction Co., both Charlotte; J. L. Crouse, Greensboro; W. P. Rose, Goldsboro; Carolina Construction Co., Hamlet; C. V. York, Hester-McElwee Co. and W. B. Barrow, all Raleigh; E. L. Derby, Fayetteville; J. W. Stout & Co., Sanford; D. J. Rose and S. S. Toler, both Rocky Mount; Anderson-Hunter

Construction Co., Danville, Va.; Wise Granite & Construction Co. and W. P. Thurston, both Richmond, Va. (Lately noted.)

N. C., Swannanoa—Swannanoa Consolidated School Dist. (Bee Tree, Pickens, Azalea and Swannanoa) will vote Nov. 22 on \$30,000 bonds to erect school. Address Dist. School Trustees.

N. C., Trenton—School Board, W. W. Barker, Chrmn., will erect 20-room brick building; bonds voted.

Okla., Olustee—Board of Education will erect \$20,000 school; 2 stories and basement; 47x55 ft.; Huseman Co., Archt., Oklahoma City.

S. C., Union—Union School Dist. Trustees, C. T. Murphy, Chrmn., will erect \$60,000 school; brick; slate roof; wood floors; steam heat. (Lately noted.)

Tex., Creedmoor—Board of Education, Leo G. Halden, Supt. of Schools, Austin, will erect 2-story brick and frame school; 45x72 ft.; cost \$20,000; Geisecke & Harris, Archts., 406 Littlefield Bldg., Austin.

Tex., Fort Worth—Forest Hill School Dist. Trustees will erect school; brick and tile; Wm. C. Meador, Archt., Dan Waggoner Bldg.

Tex., Fort Worth—Polytechnic School Board will erect ward school and high school. (\$260,000 bonds previously noted voted.)

Tex., Fredericksburg—Board of Education, C. W. Feuge, Supt. of Schools, will erect high school and remodel school; cost about \$75,000; H. F. Kuehne, Archt., 824 Littlefield Bldg., Austin.

Tex., San Elizario—School Board will erect school; \$12,000 bonds voted.

Tex., Teague—Board of Education will erect high school; \$50,000 bonds voted.

W. Va., Philippi—Broadus Baptist College will erect dormitory.

Stores.

Ala., Birmingham—W. B. Leedy Real Estate & Insurance Co. will erect 3-story brick building at 2nd Ave. between 19th and 20th Sts.; cost \$57,000; H. B. Wheelock, Archt., Steiner Bldg. (Lately noted.)

D. C., Washington—F. Edmonds will expend \$20,000 to repair building at 913 15th St.

Fla., Bradentown—Geo. Wallace will erect building on Manatee Ave.; 2 stories; 128x100 ft.; 6 stores on first floor; 18 apartments on second; brick; cost \$75,000 to \$80,000.

Fla., Lakeland—M. Roth will remodel and erect addition to Cowdery Building on E. Main St.; lately noted; first floor, stores; second floor, assembly hall and furnished rooms; 36x122 ft.; hollow tile, cement and stucco; built-up asphalt and felt roof; promenade tile floors in passages, remainder, wood; metal ceilings; interior tile; vault lights; ventilators; electric lights; cost \$18,000; Herbert D. Mendenhall, Archt. Address owner. (See Machinery Wanted—Windows; Prism Lights; Gates (Iron); Flooring (Composition); Metal Ceilings.)

Fla., Palmetto—C. F. Snyder will erect business building at Lemon Ave. and Palmetto St.; 100x100 ft.; 2 stories; interlocking tile and brick.

Fla., St. Petersburg—H. E. Wendell is preparing plans for building at Second St. and First Ave., north; 8 store rooms and arcade, leading to 5 apartments on rear.

Ga., Columbus—Silver Co. is reported to erect steel business building at 1101-13 Broad St.

Ga., Macon—Isaac Kessler, 356 Cherry St., will erect business building to replace structure lately noted burned; 40x120 ft.; 2 stories; brick; wire glass.

La., Shreveport—W. H. Werner, Commercial Bank Bldg., will erect 1-story brick building at Millam and Edwards Sts.; 68x120 ft.; brick; composition roof; concrete floors; construction by owner; material purchased. (Lately noted.)

Mo., Kansas City—Geo. Sellnick will erect building at 3809-11 Troost Ave.

N. C., Charlotte—Dolph M. Young is reported to erect 2 buildings on East Ave.; 125 ft. frontage.

N. C., Raleigh—Eldred's Department Store, Inc. purchased building on Fayetteville St. and will improve; install heating plant, etc.

Tenn., Chattanooga—Clemons Bros. will receive bids until Nov. 1 at office Louis H. Bull, Archt., 436-7 Volunteer State Life Bldg., to erect furniture store; 110x125 ft.; 6 stories and basement; fireproof; reinforced concrete frame; hollow tile; Barrett specification roof; cement, maple and quartered oak floors; ornamental terra cotta; interior tile; metal doors; wire glass; rolling partitions; steel sash and trim; vault lights; one-pipe gravity return steam heat, direct radiators; conduit system of lighting; one passenger and one freight electric elevator.

Tex., Dallas—W. F. Champion will erect 1-story brick store at 5537-9 Columbia St.; cost \$15,000.

Tex., Gonzales—C. A. Buchard and I. O. O. F. will erect brick business building to be occupied by Robertson & Mittanch; 35x90 ft.; 1 story.

Tex., San Antonio—Fred Everet will erect brick store at San Saba and Maroles Sts.; cost \$10,000.

Tex., Sherman—Marks Bros. will receive bids until Oct. 29 to erect department store building; 3 stories and basement; 75x180 ft.; ordinary construction; tar and gravel roof; wood floors; electric lights; 1 freight and 1 passenger elevator; cost \$80,000; plans and specifications at office Jno. Tulloch, Archt. (Lately noted.)

Va., Richmond—Jerry Bros. will erect store at 1804 E. Main St.; cost \$15,500.

W. Va., Buckhannon—B. F. Whitescraver will erect 3-story and basement building on S. Florida St.; 57x85 ft.

Theaters.

Fla., St. Petersburg—Bessie Squires, Syracuse, N. Y., will erect 2-story brick building at First St. and First Ave.; 9 stores on ground floor; casino and dance hall on second floor; promenade roof garden; Japanese type; H. E. Wendell, Archt., St. Petersburg.

La., Shreveport—Harry Ehrlich and Saenger Amusement Co. are reported to erect \$500,000 opera house at Louisiana and Crockett Sts.

Md., Baltimore—Irrington Theater Co., Inc., 731 Munsey Bldg., will erect \$70,000 theater on Frederick Ave.; 40x140 ft.; brick and stone; cement floors; Oliver B. Wight, Archt., 1101 Munsey Bldg.

Va., Danville—Southern Amusement Co. will erect theater on Main St.; cost \$100,000; bids opened Nov. 5.

Warehouses.

Fla., Orlando—Geo. Chick contemplates erecting 6 warehouses, covering space, 300x300 ft.

Fla., Tampa—Florida Warehouse Co. Incptd. with \$500,000 capital; T. Ed. Bryan, Pres.; W. A. Adams, Treas.; N. M. McLeran, Secy.; will establish warehouses at various points in State.

Mo., Kansas City—Perky Bros. Transfer & Storage Co., 2331 Prospect St., will erect 6 story and basement warehouse; 60x110 ft.; brick, stone, terra cotta and reinforced concrete; C. B. Sloan, Archt., 321 E. 11th St.

Miss., Biloxi—Gulf Coast Warehouse Corp., capitalized at \$100,000 by C. B. Foster, B. Talatvull, P. H. Clark and others; will erect several warehouses.

Mo., Joplin—Nichols Wire & Sheet Co., 2100 Baltimore Ave., Kansas City, will erect warehouse; 1 story; 50x120 ft.; brick and corrugated iron; tin roof.

Tex., Jasper—H. N. Gibbs & Co. will erect brick warehouse; 80x225 ft.; fireproof; cost \$20,000.

wire glass; Simons & Lapham, Archts., 42 Broad St.; Charleston Engineering & Contracting Co., Contr., at \$70,000. (Lately noted.)

Bank and Office.

Ala., Anniston—Commercial Natl. Bank will convert 2nd floor of building at Noble and 12th Sts., into 13 offices; Calhoun Const. Co., Contr.

Fla., Haines City—Growers' Commercial Bank will erect \$80,000 to \$100,000 building; 4 stories; brick and stone; terra cotta trim; Francis J. Kennard, Archt., Tampa; W. C. Robertson, Contr. (Lately noted.)

La., New Orleans—Cardondelet Bldg., Inc. will expend \$29,941 to alter building; Geo. J. Glover, Contr.

N. C., Charlotte—Law Library Assn., John A. McRae, Pres., will erect 2 additional stories to 4-story Law Bldg.; cost \$40,000; 40 additional offices; 110 offices in all; Louis H. Asbury, Archt.; J. A. Jones Const. Co., Contr.

Tex., Orange—Orange Natl. Bank will erect \$80,000 building at Main and 5th Sts.; lately noted; 50x100 ft.; concrete, brick and stone; concrete and Barrett specification roof; concrete and tile floors; steam heat, \$5,000; vaults; vault lights; A. Babin, Archt.; McDaniel & Hartford, Contrs., both Beaumont. (See Machinery Wanted—Stone; Steel (reinforced); Doors.)

W. Va., Martinsburg—Bank of Martinsburg, Nelson B. O'Neil, Cashr., will expend \$20,000 to improve building at Queen and Burke Sts.; C. L. Harding, Archt., Washington; C. A. Westenhaver, Contr., Martinsburg.

Churches.

Fla., Groveland—Methodist Episcopal Church, South, will erect \$14,000 building; 40x80 ft.; annex, 20x60 ft.; brick; asphalt slate roof; Delco lights, \$645; C. Z. Osborne, Archt.-Contr., Umatilla. Address R. L. Allen, Groveland. (Lately noted.)

N. C., Gastonia—First Baptist Church will erect \$113,650 building; 100x150 ft.; brick and tile; tile roof; wood floors; steam heat; electric lights; cost of building with heating, plumbing, light fixtures, organ and furniture, about \$140,000; Willard G. Rogers, Archt., 505 Trust Bldg., Charlotte; Brown-Harry Co., Contr., Gastonia. (Lately noted.)

Tex., Fort Worth—Weatherford Street Methodist Church will erect \$75,000 building at Weatherford and Pecan Sts.; W. C. Meador, Archt.; G. T. Hubbard, Contr. (Previously noted.)

Va., Roanoke—Lutheran Church will erect building on College Ave.; J. L. Crouse, Contr., Greensboro, N. C.

City and County.

Tenn., Nashville—Fire Department—City, Felix Wilson, Mayor, will erect \$40,000 building for fire department headquarters; J. W. Hodges, Archt.; T. J. Christian & Co., Contrs. (Lately noted.)

Courthouses.

Tenn., Nashville—Davidson County will erect addition to jail and criminal court; cost \$28,300; reinforced concrete and brick; 3 stories; composition roof; T. J. Christman & Co., Contrs. (Lately noted.)

Dwellings.

D. C., Chevy Chase—L. Lee Combs will erect \$15,000 residence at Kanawha and 39th Sts.; bungalow type; A. B. Mullett & Co., Archts.; Allan E. Walker Investment Co., Contr., both Washington.

BUILDING CONTRACTS AWARDED

Apartment Houses.

Fla., Daytona—William Fielding will erect apartment house on Coates St., nr. Harvey; 4 suites; stucco; Fuquay & Gheen, Contrs.

Fla., Daytona—Mrs. M. H. Van Valsah will erect apartment house at Atlantic Ave. and Smith Ter.; 4 suites; stucco; Fuquay & Gheen, Contrs.

Fla., St. Petersburg—Dr. D. Pierce will erect \$12,500 apartment house; 42x36 ft.; stucco on hollow interlocking tile; composition roof; wood and tile floors; interior tile; Edgar Ferdon, Archt.; Chas. DuBois, Contr. (Lately noted.)

Ky., Frankfort—Hodge-Montgomery Co., will erect \$21,000 apartment house; 36x58 ft.; stucco; asphalt shingle roof; electric lights; L. L. Oberworth, Archt.; Goin Bros., Contrs. (Lately noted.)

N. C., Charlotte—Dr. Fred D. Austin will expend \$25,000 to convert residence into apartment house; 20 rooms; brick veneer; slate roof; pine floors; flues; electric lights; B. C. Bonfoey, Archt.; Saml. E. Hilton, Contr., 603 Forest St.; McAuley, Garrison & Hopkins, contrs. for plumbing and heating. (Lately noted.)

N. C., Charlotte—J. W. Mobley will erect

\$20,000 apartment house; 40x50 ft.; frame; asbestos shingle roof; pine and hardwood floors; low pressure steam heat; electric lights; Warren Mobley, Archt., Chapel Hill; C. L. Wentz, Contr., Charlotte. (Lately noted.)

Tenn., Knoxville—Ellis Samuel will erect \$17,250 apartment house; 30x63 ft.; brick veneer; asphalt shingle roof; oak floors; steam heat; Jas. S. Shattuck, Archt.; Worsham Bros., Contrs. (Lately noted.)

Association and Fraternal.

Md., Baltimore—Hamden Lodge No. 124, I. O. O. F., Chas. A. Belt, Chrmn. Bldg. Comm., 1024 Union Ave., will erect \$40,000 building at 3818-20 Falls Rd.; 46x100 ft.; 3 stories; brick; marble trim; colonial design; G. Walter Tovell, Contr., Eutaw and McCullough Sts. (Lately noted.)

S. C., Charleston—Building Comm. of Grand Lodge, A. F. & A. M., W. W. Wannamaker, Chrmn., will extend and alter Masonic Temple at King and Wentworth Sts.; brick walls; mill construction; extension, 36 x55 ft.; alter 2 floors, 100x55 ft.; tin roof; concrete and yellow pine floors; Otis elevator; American Blower Co. forced ventilation; ornamental terra cotta; interior tile;

Fla., Daytona—John Case, 14 Volusia Ave., will erect 6-room stucco residence; Fuquay & Gheen, Contrs.

Fla., Jacksonville—Unitarian Church, Arthur D. Stevens, Chrmn. Bldg. Comm., will erect \$12,000 parsonage at Hogan and Union Sts.; Jas. R. Walsh, Archt.; Duval Constr. Co., Contr.

Fla., Lake Wales—Geo. A. Miller, Tampa has contract to erect 3 residences at Mountain Lake; cost \$40,000 to \$50,000 each.

La., New Orleans—Dixie Homestead will erect \$19,250 duplex residence at Canal and Bernadotte Sts.; G. E. & E. E. Reimann, Contrs.

Md., Baltimore—Dr. J. Ralph John, 1513 Linden Ave., will erect \$10,000 residence and garage at 3500 Copley Rd.; 32x42 ft.; garage, 18x20 ft.; brick; Geo. R. Morris, Contr., Morris Bldg.

Md., Baltimore—Mrs. Lilla Eddy Doebler will erect \$45,000 residence and garage in Guilford; 3 stories; 60x40 ft.; garage, 24x22 ft.; hollow tile and stucco; tile roof; oak, tile and concrete floors; hot water heat; electric lights; hollow fireproof tile; safes; interior tile; metal doors; steel sash and trim; Chas. Barton Keen, Archt., Bailey Bldg., Philadelphia; Hicks, Tase & Norris, Contrs., 106 W. Madison St., Baltimore. (Previously noted.)

Md., Baltimore—Saml. Merican, 811 Whitelock St., will erect \$14,000 residence on North Rd. nr. Cedar Rd.; 2½ stories; 29x33 ft.; brick; slate roof; oak and concrete floors; hot water heat, \$950; electric lights from Gas & Electric Co.; Herbert Aiken, Archt., Piel Const. Co., Edmondson Ave.; Henry A. Knott & Co., Contrs., 2101 N. Calvert St. (Lately noted.)

N. C., Lenoir—First Methodist Church will erect parsonage; cost about \$10,000; brick veneer; 10 rooms; hardwood floors; contract let. Address The Pastor.

N. C., Scotland Neck—John Edwards will erect brick residence on 12th St.; J. E. Lewis, Contr.

Tenn., Memphis—Miss Montgomery Cooper will erect \$10,000 residence; 37x28 ft.; frame; colonial design; wood shingle roof; oak floors; hot air heat; B. E. Berry, Contr. (Lately noted.)

Tenn., Memphis—J. F. Smith, 616 Mad. Ave. Bldg., will erect 2 dwellings; cost \$10,000; 32x50 ft.; brick; asphalt shingle roofs; oak and concrete floors; Arcola heating plant, \$375; interior tile; Mann & Gatling and J. Frazer Smith, Asso. Archts.; A. T. Gassett, Contr. (Lately noted.)

W. Va., Logan—Bruce McDonald will erect \$33,000 residence; brick and wood; tile roof; oak floors; vapor heat, \$3000; W. B. Smith, Archt.; V. E. Taylor, Contr., both Huntington.

Government and State.

La., Bastrop—Post Office—Treasury Dept., Jas. A. Wetmore, Acting Suprvr. Archt., Washington, D. C., will erect \$15,000 brick post office building; contract let. Address The Postmaster.

Okla., Tulsa—Armory—Brennan & Rooney have contract to erect \$10,000 armory for Battery C, second field artillery, Oklahoma National Guard, at 1109 E. 6th St.; 1 story; 120x50 ft.; structural steel and sheet iron.

Hospitals, Sanitariums, Etc.

Tenn., Memphis—Baptist Memorial Hospital will expend \$100,000 to complete nurses home; 150 rooms, swimming pool, roof garden, dining rooms, etc.; cost of completed structure, \$250,000; James Alexander Const. Co., Contr.

Hotels.

Ga., Athens—W. R. O'Neill leased Shackleford Bldg. at Clayton St. and College Ave., and will convert into hotel; 41 rooms with private bath; C. W. Cooper & Co., contrs. for carpenter work; Coster Plumbing Co., plumbing; Athens Engineering Co., electric fixtures.

Md., Frederick—Frederick Hotel Co., organized; Emory L. Coblentz, Gen. Chrmn. Executive Comm.; will erect \$900,000 hotel; Frederick Webber, Archt., 403 Morris Bldg.; Jno. S. Hershey, Contr., Stephen Girard Bldg., both Philadelphia, Pa. (Lately noted.)

W. Va., Bluefield—Samuel L. Matz will erect 3-story brick and steel addition to Matz Home Bakery for 67 additional rooms to Hotel Matz; cost \$120,000; M. H. Pedigo, Contr., Bluefield; Kingsport Brick Corp., Kingsport, Tenn., contr. for brick; Virginia Bridge & Iron Co., Roanoke, Va., steel. (Previously noted.)

Miscellaneous.

Fla., Daytona—Clubhouse—Daytona Golf and Country Club will erect \$40,000 clubhouse; frame; brick and stucco; oak floors; porch, 75x20 ft.; also erect locker room to cost \$7000; 54x20 ft.; hollow tile; showers and steel lockers; Jno. A. Rogers, Archt.; Jacob Espedahl, Contr. for locker room. (Previously noted.)

N. C., Greensboro—Home—Masonic and Eastern Star Home, J. E. Latham, Chrmn. Bldg. Comm., will erect \$25,000 addition; 2 stories with basement; brick; 25 rooms; J. A. Jones Construction Co., Contr., Charlotte.

Okla., Oklahoma City—Clubhouse—Oklahoma Club, Edw. Hooper, Mgr., will erect clubhouse; 100x100 ft. and 100x50 ft.; 8 stories; reinforced concrete, brick and stone; tile, pitch and gravel roof; concrete, pine and maple floors; steam heat; electric passenger elevator; Hawk & Parr, Archts. C. M. Dunning Constr. Co., contr. at \$247,530. (Lately noted.)

W. Va., Huntington—Huntington Independent Dist. Board of Education, Clarence L. Wright, Supt., let contract at \$12,645 to R. H. Holtzworth, to install plumbing in South Junior High School; Irving Hall Electrical Co., wiring at \$4,340; Meador & Handloser, Archts. (Previously noted.)

Schools.

Ala., Birmingham—City Commission, Jno. R. Hornady, Commr. of Education, will erect addition to Robertson School, East Lake; 5 class rooms, domestic science department, manual arts department; Leslie Welton, Archt.; Earle Cline, contr. at \$34,500. (Lately noted.)

Fla., Tallahassee—State Board of Control, P. K. Yonge, Chrmn., will erect 3-story fireproof dormitory, science building and extend dining room at Florida State College for Women; brick; tile roof; wood floors; cost \$168,000; Edwards & Sayward, Archts., 609 Chamber of Commerce Bldg., Southern Ferro Concrete Co., Contr., both Atlanta, Ga.; Henry T. Diehl, Tallahassee, heating at \$12,725. (Lately noted.)

La., Covington—St. Scholastica's Academy will expend \$15,000 to enlarge buildings, install sanitary system, etc.; F. A. Noullet, Contr., New Orleans.

La., Pearl River—Parish School Board will erect high school in Sixth Ward; cost \$10,000; Sticker Bros., Contrs.

Md., Towson—Catholic Church of Immaculate, Rev. Phillip H. Sheridan, Pastor, will

erect parochial school; cost \$55,000; 63x98 ft.; 3 stories; brick; slag roof; wood floors; steam heat; electric lights; Hugh L. Kavanaugh, Archt., 913 N. Calvert St.; Jao. J. Moylan, Contr., 538 N. Calvert St. (Lately noted.)

Miss., Minter City—Frank Streater Consolidated School Dist. Trustees will erect school; brick; auditorium to accommodate 450 persons; S. L. McGinnis, contr. at \$19,200; J. D. Lanham, plumbing. (Lately noted.)

Mo., Grandview—Board of Education, W. J. King, Secy., will erect \$50,000 school; 2 stories and basement; 45x96 ft.; brick; stone trim; White & Dean, Archts., 729 Paseo St.; Geo. Cope, 4900 Oak St., Contr. both Kansas City. (Lately noted.)

Mo., Kansas City—Board of Education, J. B. Jackson, Secy., Library Bldg., will erect gymnasium and auditorium addition to Faxon School; 2 stories and basement; 36x85 ft. and 54x99 ft.; 1 story and basement; C. A. Smith, Archt., Finance Bldg.; A. G. Harker, 6235 E. 13th St., contr. at \$115,000. (Lately noted.)

Mo., Springfield—City Board of Education will erect intermediate high school on S. Jefferson Ave.; Pauly Construction Co., contr. at \$22,997 for concrete and cement finish work. (Lately noted.)

Tenn., Johnson City—City Commn., P. F. McDonald, Commr. of Finance, will erect \$95,500 Junior High School; 3 stories; 144x111 ft.; fireproof; brick and hollow fireproof tile; Barrett specification roof; maple and concrete floors; rolling partitions; steel sash and trim; vapor heat, \$9000; electric lights \$1200; D. R. Beeson, Archt. Address James Construction Co., Inc., Contr. (Lately noted.)

Va., Charlottesville—University of Virginia, Dr. Edwin A. Alderman, Prest., will erect central heating plant; cost \$60,000; Almirall Co., Inc., Contr., 1 Dominick St., New York.

Stores.

Ala., Birmingham—W. T. and Lula Fox will expend \$15,000 for improvements to building for Hagan-Dunlap Drug Co.; 50x100 ft.; 1 and 3 stories; brick and hollow fireproof tile; composition roof; cement and tile floors; interior tile; plaster board; metal doors; ventilators; gas heating and stoves; electric lights; H. B. Wheelock, Archt.; A. Lawrenson, Contr.

Fla., Auburndale—E. M. Baynard will erect \$15,000 building; 103x55 ft.; brick; built-up roof; concrete floors; ventilators; Gambier & Parslow, Archts.; Parslow & Scott, Contrs., both Tampa. (Lately noted.)

Fla., Tampa—Mrs. Eva Wolfson will erect \$30,000 brick store at 1625-9 7th Ave.; G. A. Miller, Contr.

Fla., St. Petersburg—W. S. Ross, Pittsburgh, Pa., will erect 2-story hollow tile and stucco building at 9th St. and 7th Ave.; 45x40 ft.; store rooms on lower floor; offices above; cost \$12,000; Fred Dillman, Contr.; W. S. Shull, Archt., both St. Petersburg.

Mo., Kansas City—White & Denowitz, 4618 Chestnut St., will erect store building; 1 story and basement; 50x100 ft.; Agee-Block, Contr., 405 Commerce Bldg.

Mo., Kansas City—Keystone Realty Co., Rialto Bldg., will erect \$100,000 store and office building; 3 stories and basement; 50x100 ft.; S. E. Edwards, Archt., 502 Massachusetts Bldg.; W. R. Jewell, Jr., Contr., 227 Rialto Bldg.

Mo., Kansas City—J. A. Huppe, 915 Prospect St., will erect \$20,000 store; 2 stories and basement; 57x138 ft.; F. J. Becker, Contr., 132 E. Short St., Independence.

Mo., St. Louis—L. Washteins, 4402 Evans

Ave., will erect \$15,000 store and flat building; 2 stories; 45x61 ft.; Jacob Mulman, Contr., 5024 Kensington St.

Mo., St. Louis—Wm. Rehm, 4757 Terrace Ave., will erect \$15,000 store and flat building; 2 stories; 46x43 ft.; Frank Ruehl, Contr., 3502 N. Jefferson Ave.

N. C., Charlotte—Oats-Sanders Estate will expend \$15,000 to remodel department store for Edrd Bros.; tin roof; maple floors; electric lights; J. P. Propst., Contr., 19 W. 5th St. (Lately noted.)

Tex., Port Arthur—M. Aguilina will erect 2-story brick business building at Houston Ave. and 9th St.; upper floor apartments; cost \$25,000; Allan & Evans, Contrs.

Tex., Sherman—Hall Furniture Co. will improve and erect third story addition to building at Crockett and Lamar Sts.; contract let.

Warehouses.

Fla., Gary (P. O. Tampa)—Southern Bottle Mfg. Co., I. F. Jones, Prest., will erect

warehouse in connection with glass plant; 36x62 ft.; brick and concrete; Oatley-Jones Co., Contr., Tampa.

Ga., Atlanta—Stein & Co. will erect 2-story warehouse on Decatur St.; 50x236 ft.; cost \$35,000; Foundation Co., Contr.

Tex., Dallas—A. C. Rick will erect warehouse and storage establishment on Elm St. between Good and Hawkins Sts.; 2 stories; 177½x310 ft.; brick; several storerooms on first floor; cost \$80,000; Chas. Halper, Contr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Ammunition.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Oct. 28 to furnish 100,000 cartridges, ball caliber 22 long; delivery Depot Quartermaster, 18th and Washington Ave., Philadelphia, Pa.; Sch. No. 114; plans on file or with Depot Quartermaster, 1100 S. Broad St., Philadelphia.

Badges.—Fayetteville Ice & Mfg. Co., Fayetteville, N. C.—Names and addresses mfrs. of special badges for use at convention.

Bakery Equipment.—W. P. Farley Co., Maysville, Ky.—Data and prices on complete bakery outfit for town of about 10,000 population.

Band Resaw.—E. E. Wollert & Son, Littleton, N. C.—Second-hand band resaw, good condition.

Blower.—R. H. Etheredge, Saluda, S. C.—Blower for No. 97 Newman Machine Co. planer.

Boilers.—H. A. Rankin, Hallsboro, N. C.—Prices on second-hand 60 to 70 H. P. return tubular of firebox boiler, 35 or 40 H. P. firebox boiler, 20 H. P. Frick mounted boiler and engine.

Boom and Bucket.—D. C. Elphinstone, 408 Continental Bldg., Baltimore, Md.—2 bag pavers boom and bucket, good condition, for use in Baltimore.

Brick.—J. F. Horne, Tuscaloosa, Ala.—Prices on face brick.—(See Buildings Proposed, Dwellings.)

Brick Making Machinery.—R. W. Johnson, 732 Westover Ave., Norfolk, Va.—Names and addresses mfrs. of brick making mch.; also data on mfr. of bricks, etc.

Bricks (Fire, Shale, etc.).—S. W. Bollinger, upt., Florida Sugar & Food Products Co., Canal Point, Fla.—Several thousand fire, shale and mud bricks for boiler setting.

Bridge Construction.—Whelen Bridge Dist., Gurdun, Ark.—Bids to build 16x192-ft. bridge; cost \$27,000; plans, etc., from Parks Engineering Co., Engr., Pine Bluff, or Gurdun, Ark. (See Bridges, Culverts, Viaducts, Etc.)

Bridge Construction.—Chester County Board of Directors, Chester, S. C.—Bids until Nov. 1 to build 249-ft. reinforced concrete bridge over Fishing Creek on Chester-Rock Hill road; 72,808 sq. yds. bituminous paving; etc.; South Carolina State Highway Dept., F. A. Project 11; plans, etc., with County Engr., Chester, and State Highway Engr., Columbia, S. C.

Bridge Construction.—Comms. Broadway-Main Street Bridge Dist., Justin Matthews, Secy., Moore & Turner Bldg., Little Rock, Ark.—Bids until Nov. 16 to construct superstructures of 2 reinforced concrete arch bridges across Arkansas river; all sub-structure work except for approaches has been completed; plans, etc., on file. (See Construction News, Road and Street Construction.)

Bridge Construction.—Jefferson County Bldg Dist. Comms., L. F. Sallee, Secy., Pine Bluff, Ark.—Bids until Oct. 28 to replace existing wooden trestle approach to Free bridge with steel approach; new structure, steel trestle 1400-ft. long including one span 120-ft. long with bents ranging from 10 to 24-ft.; concrete floor 16-ft. wide; plans, etc., from Parks Engineering Co., Engr., Citizens Bank Bldg. (See Construction News, Bridges, Culverts, Viaducts, etc.)

Building Material.—Leslie N. Iredell, Archt., 14-16 Campbell Bldg., Tampa, Fla.—Samples, prices and catalogues on all kinds of building material.

Building Material.—M. A. Long Co., 1523 Munsey Bldg., Baltimore, Md.—Sub bids and estimates until Nov. 1 to erect Montebello School, Harford Ave. and 32nd St., Baltimore; Clyde N. and Nelson Friz, Archts., Lexington Bldg., Baltimore.

Building Materials.—C. H. Murdock, Cordell, Okla.—Data and prices on building materials including hollow fire proof tile; metal ceilings; hardwood floors; ornamental terra cotta; interior tile; rolling partitions; wire glass; concrete floors; ventilators and steel sash and trimmings. (See Construction News, Motor Cars, Garages, Tires, etc.)

Canvas.—G. J. Phillips, Box 385, Princeton, Ky.—Prices on canvas for mfg. gloves. (See Construction News, Miscellaneous Factories.)

Caps (Dress).—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Oct. 28 to furnish 15,000 dress caps, delivery to Depot Quartermaster, U. S. Marine Corps, Philadelphia, Pa.; Sch. No. 117; plans on file or with Depot Quartermaster, 1100 S. Broad St., Philadelphia.

Cement (Asphalt).—See Street Paving Materials.

Cement.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Oct. 28 to furnish Marine Corps 351 bbls. Portland cement for Depot Quartermaster, Port au Prince, Haiti; delivery to Naval Operating Base, Hampton Roads, Va.; Sch. 120; information on application.

Chutes (Life Saving).—John J. Phoenix, State Supt., Children's Home Society of North Carolina, Inc., Greensboro, N. C.—To correspond with mfrs. of life saving chutes.

Cold Storage Plant.—Red Gum Veneer Co., W. B. Henry, Mgr., Tarboro, N. C.—Purchase equipment for 10,000 bbl. capacity cold storage plant, cold air circulation plan. (See Construction News, Ice and Cold Storage Plants.)

Cork Cutting Machine.—John K. Giegling, care of Guillo Sala & Co., 396 Broadway, New York.—Machine to cut corks for bottles, corks must be in taper form; for export to Spain.

Crusher (Disc).—L. F. Seyfert's Sons, Inc., 437 N. 3rd St., Philadelphia, Pa.—48-in. Symons disc crusher.

Cutters (Paper).—Print Shop, W. Hall

Moss, Dayton, Tenn.—Names and addresses mfrs. of paper cutters for printers' use, small and medium sizes, would be interested in second-hand cutters.

Cutting and Stitching Machines.—G. J. Phillips, Box 385, Princeton, Ky.—Names and addresses mfrs. cutting and stitching machines for glove factory. (See Construction News, Miscellaneous Factories.)

Doors.—McDaniel & Hartford, Beaumont, Tex.—Bronze covered doors and tin clad fire doors. (See Contracts Awarded, Bank and Office, Tex., Orange.)

Drykln Outfit.—R. P. Johnson, Wytheville, Va.—Second-hand, Standard or National drykln outfit.

Electrical Equipment.—Heaton Coal Co., L. L. Heaton, Mgr., Tacoma, Va.—Electrical equipment for 500 ton daily capacity mine; immediate delivery. (See Construction News, Coal Mines & Coke Ovens.)

Electric Light Plant.—City, A. J. Ross, Mayor, Edinburg, Tex.—Bids opened to construct electric light plant; plans, etc., from H. E. Wilcox, City Engr. (See Construction News, Electric Plants.)

Engineering Work.—City of Ayden, N. C., G. W. Prescott, Clk.—Bids on street paving made on percentage basis on cost of paving or contain any other proposal bidder desires.

Fans (Suction and Exhaust).—W. E. Toler, Pawnee, Okla.—Catalogs showing and describing suction and exhaust fans for handling seed cotton, etc.

Fencing.—Lackland Bros. Poultry Ranch and Hatchery Ranger, Tex.—Fencing for poultry farm. (See Construction News, Miscellaneous Enterprises.)

Filing Room Equipment.—Dorchester Lumber Co., Badham, S. C.—Filing room equipment.

Flooring (Composition).—M. Roth, Lakeland, Fla.—Composition flooring. (See Buildings Proposed—Stores.)

Flour Mill Machinery.—Yukon Mill & Grain Co., J. F. Krouth, Prest.-Mgr., Yukon, Okla.—Data and prices on flour mill machinery.

Frog Switch Points.—See Rails, etc.

Garage Equipment.—Dixon Buick Co., 119 S. Poinsettia St., West Palm Beach, Fla.—Bids until Nov. 1 for garage mch. and equipment. (See Construction News, Motor Cars, Garages, Tires, etc.)

Gates (Iron).—M. Roth, Lakeland, Fla.—Folding iron gates. (See Buildings Proposed—Stores.)

Generator Sets.—Heaton Coal Co., L. L. Heaton, Mgr., Tacoma, Va.—Generator sets for 500 ton daily capacity mine; immediate delivery. (See Construction News, Coal Mines & Coke Ovens.)

Gloves (Leather).—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids until Nov. 1 to deliver leather gloves to navy yard, Washington.

Handle Machinery, etc.—S. F. Brasington, Camden, S. C.—To correspond with mfrs. of spoke and handle mchy.

Hides.—G. J. Phillips, Box 385, Princeton, Ky.—Prices on split hides for mfg. gloves. (See Construction News, Miscellaneous Factories.)

Holst (Mine).—D. C. Elphinstone, 408 Continental Bldg., Baltimore, Md.—Mine hoist without boiler, double cylinder, double drum; one drum to hold 2100 ft. $\frac{3}{4}$ -in. cable; second-hand if in good condition.

Lubricants.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids opened to furnish 15,000 lbs. cup grease, 7,000 lbs. transmission gear lubricant; delivery Post Quartermasters, at Quantico, Va., Parris Island, S. C., and Hampton Roads, Va.; Sch. 115; information on application.

Metal Ceilings.—M. Roth, Lakeland, Fla.—Metal Ceilings. (See Buildings Proposed—Stores.)

Mill (Flour) Construction.—Yukon Mill & Grain Co., J. F. Krouth, Prest-Mgr., Yukon, Okla.—Correspond with companies to construct flour and grain mill.

Mining Machinery.—Heaton Coal Co., L. L. Heaton, Mgr., Tacoma, Va.—Mining mchy. for 500-ton daily capacity mine; immediate delivery. (See Construction News, Coal Mines and Coke Ovens.)

Motors.—Heaton Coal Co., L. L. Heaton, Mgr., Tacoma, Va.—Motors for 500-ton daily capacity coal mine; immediate delivery. (See Construction News, Coal Mines and Coke Ovens.)

Motors (Slip Ring).—Vanco Mills, Henderson, N. C.—75 and 50 H. P. slip ring motors, 900 R. P. M., 2200 volts, alternating current.

Oil (Road and Fuel).—See Street Paving Materials.

Paving.—City, Chas. H. Brown, Mayor Commr., Tampa, Fla.—Bids to grade, pave and curb Westland Ave., 2,685 sq. yds. pavement; Melville Ave., 1,300 sq. yds. pavement; Sixteenth St., etc.; bids opened Oct. 25; specifications, etc., from City Engr. (See Construction News—Road and Street Construction.)

Paving.—Town, J. H. Crane, Clk., Mt. Dora, Fla.—Bids until Nov. 15 to construct 47,000 sq. yds. sheet asphalt pavements; 42,000 lin. ft. cement curb; etc.; plans, etc., on file.

Paving.—City, P. A. Poag, Secy., Monroe, La.—Bids until Nov. 2 to construct 42,000 sq. yds. paving; 15,000 cu. yds. grading; 22,000 ft. concrete curb and gutter; plans, etc., from R. S. Reynolds, City Engr.

Paving.—City, A. L. Bowers, Mayor, Palestine, Tex.—Bids until Oct. 31 to construct 80,986 sq. yds. pavement; sheet asphalt, asphaltic composition, rock asphalt and other types; 49,990 lin. ft. curb and gutter; etc.; plans, etc. from City Engr. (See Construction News, Road and Street Construction.)

Paving.—Board of Awards, Baltimore, Md.—Bids to grade, curb and pave streets listed in Contracts Nos. 202-0A, 203-0C and 204-0C; cement concrete, sheet asphalt, new granite block and vitrified block; 1010 sq. yds. cement concrete; 5,650 sq. yds. sheet asphalt; 1,370 sq. yds. cement concrete; specifications, etc., from Paving Comsn., 214 E. Lexington St.

Painting.—Sherlock Swann, Custodian U. S. Post Office, Baltimore, Md.—Bids until Oct. 25 for exterior painting of post office.

Planer and Matcher.—J. D. Pitts, Glen Alpine, N. C.—Second-hand planer and matcher combined for woodworking, weighing about 6000 lbs.; good condition.

Pottery Machinery, etc.—Box 283, Macon,

Ga.—Data and prices on mchy. for mfr. of plain flower pots of red and white clay, also names and addresses of pottery mfrs.

Power Plant Machine.—White Pine Power & Light Co., G. M. Felmet, Owner, White Pine, Tenn.—100 K. W. second hand machine direct connected to ball engine or any good standard engine, 2,300-volt, 60-cycle, 3-phase current. (See Construction News—Electric Plants.)

Printers Supplies.—Print Shop, W. Hall Moss, Dayton, Tenn.—Second-hand printers supplies including lead and rule cutters, type cases, etc.

Prism Lights.—M. Roth, Lakeland, Fla.—Prism floor lights. (See Buildings Proposed—Stores.)

Pumps.—Heaton Coal Co., L. L. Heaton, Mgr., Tacoma, Va.—Pumps for 500 ton daily capacity mine; immediate delivery. (See Construction News, Coal Mines & Coke Ovens.)

Rails, etc.—R. H. Etheredge, Saluda, S. C.—5 tons of 56 or 60 lb. relaying rails also frog switch points.

Resaw, etc.—John G. Duncan Co., Jackson and Central Sts., Knoxville, Tenn.—Dealers prices and cuts on second-hand and rebuilt 20 and 24-in. resaw and self feed rip saw.

Road Construction.—Greenbrier County Court, Lewisburg, W. Va.—Bids until Nov. 1 to grade and drain $7\frac{1}{2}$ mi. Blue Sulphur Turnpike from Palestine to Buster's Store at Blue Sulphur Springs; plans, etc., from J. W. Rader, County Engr., and County Clk. (See Road and Street Construction.)

Road Construction.—Jefferson County Board of Revenue, Birmingham, Ala.—Bids until Nov. 11 to surface with cinders, shale or chert the following roads; Mulga to Port of Birmingham, 11 mi.; Warrior-Robbins road, 10 mi.; Trussville to Acmar road, 5 mi., and Oak Grove-Lock 17 road, 6 mi.; plans, etc., with C. J. Rogers, County Highway Engr.

Road Construction.—Fayette County, J. P. Ehlinger, County Judge, La Grange, Tex.—Bids until Nov. 1 to surface 11.27 mi. Highway No. 3; gravel; A. Schlafli, County Engr., Schulenburg, Tex. (See Construction News, Road and Street Construction.)

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until Nov. 2 to construct 1,638 mi. State road from Sedalia southward; Pettis County, State Aid Project 20.91; cost \$6,662.38; S. M. Rudder, Div. Engr. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Oct. 27 to build road in Craven County, south of Newbern. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Oct. 27 to construct road in Pamlico County from Bayboro to Craven county line. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Oct. 27 to construct road in Wayne County from Goldsboro to Lenoir county line. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Oct. 27 to construct road in Jones County from Trenton to Craven county line. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until

Nov. 8 to construct hard-surface road in Wake County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Oct. 27 to construct road in Greene County from Snow Hill to Lenoir county line. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 8 to construct hard-surface road in Orange County. (See Construction News, Road and Street Construction.)

Road Construction.—Osceola County Commrs., J. L. Overstreet, Clk., Kissimmee, Fla.—Bids until Oct. 29 to construct 6 mi. road in Special Road and Bridge Dist. No. 4; specifications from Clk. Circuit Court. (See Construction News, Road and Street Construction.)

Road Construction.—Halifax County Highway Comsn., Weldon, N. C.—Bids until Nov. 5 to construct 4 mi. sand-clay or clay-gravel roads to Halifax county, road from Tillery to Crowell's Cross roads; 4,000 cu. yds. sand-clay surfacing; 4,000 cu. yds. gravel surfacing; plans, etc., from C. F. Gore, Supt. Highways. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 4 mi. Fairmont and Morgantown pike between Little Indian Creek and Marion county line including grading and draining; Project 3003; plans, etc., on file, and with Div. Engr., Morgantown. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 10.35 mi. Northwestern Turnpike from New Creek to Hampshire county line including grading and draining; Mineral County, Project 3010; plans, etc., on file, and with Div. Engr., Keyser, W. Va. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 1.75 mi. Fairmont and Morgantown pike from end of present concrete road to Monongalia county line including grading and draining; Project 3004; plans, etc., on file, and with Div. Engr., Fairmont. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 3 mi. Parkersburg-Williamstown road including grading, draining and paving with concrete; Project 3005; plans, etc., on file, and with Div. Engr., Parkersburg, W. Va. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 2 mi. Glenville-Weston pike from end of Project 82-B to Lewis county line including grading and draining; Project 3100; plans, etc., on file, and with Div. Engr., Glenville. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 2 mi. National Pike, west of Pennsylvania state line including grading, draining and paving with concrete; Ohio County, Project 3073; plans, etc., on file, and with Div. Engr., Wheeling, W. Va. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 6.8 mi. Midland Trail between Longacre and Kanawha Falls including grading and draining; Fayette County, Proj-

ect 3040; plans, etc., on file at Charleston, and with Div. Engr., Fayetteville, W. Va. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 6.6 mi. Midland Trail between end of Project 45 and point near Kanawha county line including grading, draining and paving with bituminous penetration macadam; Project 3001; plans, etc., from Div. Engr., Winfield, and on file at Charleston. (See Construction News, Road and Street Construction.)

Road Construction.—State Road Comsn., Charleston, W. Va.—Bids until Nov. 17 to construct 2.6 mi. Midland Trail between point near Putnam county line and end of paving west of St. Albans including grading, draining and paving with bituminous penetration macadam; Project 3042; plans, etc., on file, and with Div. Engr. (See Construction News, Road and Street Construction.)

Road Construction.—State Highway Dept., Montgomery, Ala.—Bids about Dec. 1 to construct 8.6 mi. highway between Tennessee river and Florence; hard-surfaced pavement and gravel construction; cost \$192,728.64; A. P. Henderson, Div. Engr., Decatur, Ala. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 8 to construct hard-surface road in Durham County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 18 to construct road in Alamance County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 18 to construct road in Guilford County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 25 to construct road in Gaston County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 25 to construct road in Iredell County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 25 to construct road in Mecklenburg County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 18 to construct road in Rockingham County. (See Construction News, Road and Street Construction.)

Road Construction.—North Carolina State Highway Comsn., Raleigh, N. C.—Bids until Nov. 25 to construct road in Catawba County. (See Construction News, Road and Street Construction.)

Roofing (Tile).—J. F. Horne, Tuscaloosa, Ala.—Prices on tile roofing. (See Buildings Proposed, Dwellings.)

Roofing.—Lackland Bros. Poultry Ranch and Hatchery, Ranger, Tex.—Rubber roofing for poultry houses. (See Construction News, Miscellaneous Enterprises.)

Saw Mill Equipment.—Long Branch Lumber Co., Ellisville, Miss.—8 ft. band mill, 5 saw edger, 2 saw trimmer, live rools, shaftings, pulleys, belts, etc. (See Con-

struction News, Lumber Manufacturing Plants.)

Saw Mill Equipment.—Dorchester Lumber Co., Badham, S. C.—8 ft. band saw mill; carriage with steam feed and steam set works, 60-in. edger; 5 saw trimmer; No. 6 Mitts & Merrill hog; 5, 6, and 7 ft. band resaw, vertical, Mershon preferred; self feed band rip saw; two 6x15 in. round cylinder six knife planers.

Sewers.—Crownsville State Hospital, Wm. L. Marbury, Prest. Board of Mgrs., 701 Maryland Trust Bldg., Baltimore, Md.—Bids until Nov. 3 to construct sewage disposal plant; plans, etc., from Ch. Engr., Maryland State Dept. of Health, 16 W. Saratoga St., Baltimore, Md. (See Construction News, Sewer Construction.)

Sewers.—City of Beaumont, Tex.—Bids opened about Nov. to construct 3 to 8 ft. concrete sewers; 60x10 to 10x3ft. county ditches; R. M. Fulweiler, City-Engr. (See Construction News, Sewer Construction.)

Shock Absorbers and Parts.—Ezo Shock Absorber Co., Ayden, N. C.—To contract for mfr. of various parts of shock absorbers; also want distributors for spring protector and shock absorber

Soap Making Machinery.—Bang-Go Soap Mfg. Co., 2304 Front St., Meridian, Miss.—Bids until Jan. 1, data and prices on mchy. for cooking, cooling, pressing and wrapping soap in cake form also in paste form. (See Construction News, Miscellaneous Factories.)

Stand-Pipe.—City of New Braunfels, Tex., Chas. Alves, Mayor.—Bids until Nov. 10 to construct steel stand pipe with concrete foundation; \$30,000; M. L. Diver, Const. Engr., San Antonio, Tex. (See Construction News, Miscellaneous Construction.)

Steel.—F. W. Kloene, 19-16th St., Toledo, O.—Names and addresses mfrs. of or dealers in Joe Calk steel.

Steel (reinforcing).—McDaniel & Hartford, Beaumont, Tex.—Reinforcing steel. (See Contracts Awarded, Bank and Office, Tex., Orange.)

Steel Piling, etc.—Bakers Haulover Dist., J. C. Baile, Chrmn., Miami, Fla.—Data and prices regarding relative value of steel and rock piling for bulkheading channel, information regarding life of standard steel piling in salt water desired; also desirous of communicating with those in charge of such work. (See Construction News, Miscellaneous Construction.)

Stone.—McDaniel & Hartford, Beaumont, Tex.—Bedford stone. (See Contracts Awarded, Bank and Office, Tex., Orange.)

Street Paving Materials.—City of Nashville, Tenn., S. H. McKay, Secy., Board of Public Works.—Bids until Oct. 25, 1300 tons Estill springs sand, 400 tons asphalt cement, 1 tank car of road oil; 2 car tanks of fuel oil; f. o. b. Nashville; W. W. Southgate, City Engr.

Studs (Steel).—Joseph Stolz & Son, Inc., Commerce Ave., Highbridge Station, N. Y.—3000 oversize steel studs $\frac{1}{2}$ -in. with outside diam. on one end of .385 in., 3000 oversize steel studs $\frac{1}{2}$ -in. with outside diam. on one end of .390 inch; in accordance with drawing No. 57555; f. o. b. Yorktown, Va.; information on application.

Syrup (Cane) Factory.—J. Elwood Moore, Elwood Park Farms, Bradenton, Fla.—Information relative to co-operative plan to raise cane and mfr. into syrup.

Tire (Automobile) Manufacture Equipment.—M. Leo Elliott, Curry Bldg., Tampa, Fla.—Names and addresses mfrs. of equipment for mfr. of automobile tires, including vulcanizers, etc.

Vulcanizers.—M. Leo Elliott, Curry Bldg.,

Tampa, Fla.—Names and addresses mfrs. of vulcanizers for mfr. of automobile tires.

Water-Works.—City, A. J. Ross, Mayor, Edinburg, Tex.—Bids opened to construct water-works; plans, etc., from H. E. Wilcox, City Engr. (See Construction News, Water-Works.)

Water-Works.—State Board of Control and Economy of Alabama, Montgomery, Ala.—Bids until Nov. 10 to install water supply system in State Penitentiary at Kilby, Ala., including well to supply 400 U. S. gals. water per min., pump and necessary machinery and equipment; plans, etc., on file. (See Construction News, Water-Works.)

Water-Works.—City, Ashland, Ky.—Bids opened to extend water-works; construct 2,500,000-gal. capacity filter plant; 600,000-gal. capacity reservoir; install centrifugal pump; Alvord & Burdick, Engrs., Harford Bldg., Chicago, Ill. (See Construction News—Water-Works.)

Water-Works.—Wichita County Improvement Dist. No. 1, F. M. Lawton, Gen. Mgr., Wichita Falls, Tex.—Bids until Nov. 15 to construct reservoir and canal system, consisting of earth dam, outlet works, spillway, etc., diversion dam with concrete overflow, levee with outlet gates, and irrigation distributing system; 1,400,000 cu. yds. earth embankment; 300,000 cu. yds. earth levee, etc.; place flumes, gates, etc.; plans, etc., on file. (See Construction News—Water-Works.)

Windows.—M. Roth, Lakeland, Fla.—Copper covered front windows. (See Buildings Proposed—Stores.)

Wiring System.—Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids until Oct. 26 for revision of wiring system in schools Nos. 1, 30, 94, 42, 112, 113, Western Higs and Colored High schools; Richard Gwinn, Register, City Hall; H. G. Perring, Chief Engr.

Wiring System.—Board of Awards, Wm. F. Broening, Prest., Baltimore, Md.—Bids until Oct. 26 for revision of wiring system of Baltimore City College, N. Howard St.; Richard Gwinn, Register, City Hall; H. G. Perring, Chief Engr.

Woodworking Machinery.—John G. Duncan Co., Jackson and Central Sts., Knoxville, Tenn.—Dealers prices and cuts on second-hand rebuilt 24-in. double surface, planer, matcher and moulder.

Financial News

New Financial Corporations.

D. C. Washington—Washington Realty & Investment Co., capital \$250,000, incptd. by Benj. H. Brill, David Abraham.

Ga., Athens—Fidelity Loan & Investment Co., incptd. with \$100,000 capital:

Ky., Covington — Kentucky Perpetual Building & Loan Assn., capital \$2,500,000, incptd. by Fred A. Fisher, John L. Brady.

Md., Baltimore — Baltimore Mortgage & Discount Corp., 411 W. Franklin St., capital \$1,000,000, incptd. by Harry O. Wilson, Prest.; Charles F. Fowler, V.-P.

Md., Baltimore—Wingate & Brown, 1512 Pennsylvania Ave., capital \$350,000, incptd. by T. Thomas Brown, Jr., T. Edward Howes.

Md., Baltimore — Commerce Building & Loan Assn., 101 Chamber of Commerce Bldg., capital \$500,000, incptd. by Christian Volz, Wm. L. Geddes.

Md., Colgate (P. O. Baltimore County)—Fifth Commr. Dist Building & Loan Assn., capital \$1,300,000, incptd. by James A. Hudgins, Geo. Lawrence.

Md., Mt. Washington Heights (P. O. Baltimore)—Mt. Washington Heights Building Assn., Elderslie Ave. and Pimlico road, capital \$650,000, incptd. by H. Alfred Mchen, T. Earle Hoover.

Mo., Hayti—Hayti Building & Loan Assn., incptd., with \$100,000.

Mo., St. Louis—St. Louis Realty Finance Co., capital \$1,000,000 organized with Frank L. Dittmeier, Prest. and Mgr.; Ottmar G. Starck, Secy.

N. C., Lillington—Lillington Building & Loan Assn., capital \$50,000, incptd. by J. R. Baggett.

N. C., Lillington—J. R. Baggett interested in establishing building and loan association with \$25,000 capital.

N. C., Smithfield—First National Bank capital \$100,000 and Citizens National Bank capital \$50,000 have consolidated.

Okl., Enid—South Western Fire Insur Co., capital \$350,000 incptd., by J. S. Ogle J. E. Smith.

Okl., Muskogee—Muskogee Building & Loan Assn., capital \$500,000, incptd. by A. R. Caldwell, A. C. Trumbo.

S. C., Columbia—Eau Claire Building & Loan Assn., capital \$25,000, incptd. by C. C. Muller, H. D. Loric and others.

Tex., El Paso—Mutual Building & Loan Assn., capital \$5,000,000, incptd. by J. J. Ormsbee, A. H. Anderson.

Tex., For Worth—Agricultural—Live Stoc' Finance Corp., Neil P. Anderson Bldg., cap ital \$1,500,000 will organize.

Tex., Fort Worth—Marion Sanson interested in organization of livestock and agricultural loan agency with \$1,500,000 capital.

W. Va., Elkins—Mutual Improvement Assn., incptd. with T. B. McConnell, W. M. Lewis.

W. Va., Fairmont—Colored Citizens Investment Co., capital \$50,000, organized with J. P. Robinson, John Williams and others.

W. Va., Kenova—Kenova Building & Loan Assn., capital \$100,000, incptd. by B. D. Garrett, F. R. Peck.

W. Va., Williamson—Bankers Finance Corp., capital \$300,000, incptd. by E. F. Randolph, C. B. Early.

New Securities.

Ala., Decatur—School—City will receive bids until Oct. 27 on \$100,000 of 6 per cent 20-yr. school bonds, dated Dec. 1, 1921; E. W. Collier, Clk. (Lately noted inviting bonds.)

Ark., Magnolia—Road—Magnolia-McNeill Road Improvement Dist. No. 1 will sell \$100,000 of 6 per cent 18-yr. serial road bonds; G. Truman Cross, Dist. Secy.

Fla., Apopka—Street—Bond Trustees will sell \$50,000 street bonds on Oct. 25. Address The Mayor.

Fla., De Land—School—V. W. Gould, Chrmn. Board Public Instruction will receive bids until Nov. 10 on \$60,000 of 6 per cent school bonds.

Fla., Fort Lauderdale—School—School Board sold school bonds.

Fla., Fort Pierce—Bridge—St. Lucie County will vote on \$35,000 bridge bonds. Address County Commrs.

Fla., Kissimmee—Road—Osceola County sold \$80,000 Lake Wilson road bonds to C. W. Lowry, Jacksonville, Fla.

Fla., Live Oak—School—Suwanee County sold \$80,000 of 8 per cent semi-annual \$1000 denomination time warrants, at par; J. O.

Holmes, Supt. Public Instruction. (Lately noted inviting bids.)

Fla., San Antonio—Electric—City voted \$6,000 electric light plant bonds. Address The Mayor.

Fla., West Palm Beach—Road—Palm Beach County will sell \$80,000 road construction bonds of Special Road and Bridge Dist. No. 8; Fred. E. Fenno, Clk.

Ga., Calhoun—Road—Gordon County sold \$300,000 of 6 per cent road bonds. Address County Commrs.

Ga., Monroe—School—Clifford Walker, Attorney will receive bids until Oct. 27 on \$21,000 of 7 per cent semi-annual \$1000 denomination Good Hope School Dist. bonds; F. P. Prather, Chrmn. of Board.

Ga., Thomasville—School—Thomas County Board of Education will vote Nov. 12 on \$25,000 school bonds.

Ky., Ashland—Water—City sold \$160,000 of 5% per cent \$1000 denomination water bonds, dated Jan. 15, 1921 to Tillattson & Wallcott, Cincinnati, O., at 103.35. (Lately noted.)

Ky., Hazard—Water, Sewer and City Hall—City will vote Nov. 8 on \$75,000 water, \$50,000 sewer and \$25,000 city hall bonds. Address The Mayor.

La., Amite—Bridge, Etc.—Tangipahoa Parish, 7th and 8th Wards will vote Nov. 22 on bridge and horticulture experimental farm bonds. Address Police Jury.

La., Hammond—Electric, Sewer, Water, Street and City Hall—City voted \$55,000 street, \$40,000 city hall, \$20,000 paving, \$18,000 sewer and other bonds. Address The Mayor.

La., Harrisonburg—Road—Catahoula Parish sold \$690,000 of 5 per cent road bonds to Smith Bros. Construction Co., at par and interest including \$400,000 Road Dist. No. 1, \$1000 denomination; \$220,000 Road Dist. No. 2, \$1000 denomination and \$70,000 Road Dist. No. 3, \$500 denomination. (Lately noted inviting bids.)

La., Mandeville—Harbor—City voted \$25,000 harbor improvement bonds. Address The Mayor. (Lately noted to vote.)

Miss., Brookhaven—School—Lincoln County Suprvs. will vote Nov. 5 on school bonds of Johnston Station School.

Mo., Boonville—Bridge—City may vote on \$50,000 bridge bonds. Address The Mayor.

La., Vidalia—Road—Concordia Parish Police Jury will receive bids until Nov. 14 on 50,000 of 6 per cent \$1000 denomination road bonds; John Dale, Jr., Secy.

Miss., Hazlehurst—Road—Copiah—County voted Oct. 17 on \$50,000 road bonds. Address County Commrs.

Miss., Yazoo City—Road—Yazoo County may vote on \$500,000 road bonds. Address Board Suprvs.

Mo., Chillicothe—Drainage—Medicine Creek Drainage Dist. sold \$25,000 of 6 per cent \$1000 denomination bonds to Geo. H. Walker, St. Louis, Mo.

Mo., Columbia—School—School Board will vote Oct. 27 on \$95,000 school bonds. (Previously noted.)

Mo., Jackson—Cape Girardeau County Court will vote in January on county farm building bonds.

Mo., Princeton—Hospital—Mercer County sold \$35,000 of 5 per cent hospital bonds to Mercantile Trust Co., St. Louis, at 92.005.

N. C., Charlotte—Sewer, Water and Street—City will sell \$1,150,000 improvements including \$700,000 street, \$300,000 water and \$150,000 sewer. Address Mayor Walker.

N. C., Hayesville—Road—Clay County, W. J. Winchester, Chrmn. County Commrs. will receive bid until Nov. 7 on \$100,000 of 6 per cent road bonds.

Mo., Sarcoxie—Water—City sold \$12,000 of 6 per cent water bonds to Hanchett Bond Co., Chicago, at 95.75. (Lately noted inviting bids.)

Mo., Sedalia—Courthouse—Pettis County Court will vote Nov. 15 on \$400,000 courthouse bonds.

N. C., Asheville—School—Buncombe County Consolidated Swannanoa Dist. will vote Nov. 22 on \$50,000 school bonds. Address County Commrs.

N. C., Leaksville—Street—Board of Commrs. will receive bids until Nov. 3 on \$45,000 of 6 per cent semi-annual \$1000 denomination street improvement bonds, dated Oct. 1, 1921; J. W. Norman, Clk.

N. C., Monroe—School—Union County Commrs., M. C. Long, Clk., sold \$100,000 of 6 per cent semi-annual \$1000 denomination road bonds to American Trust Co., Charlotte, at par and interest. (Lately noted inviting bids.)

N. C., Newton—Road—Catawba County Commrs. will receive bids until Nov. 30 on \$200,000 of 6 per cent semi-annual road bonds, dated July 1, 1921; Osborne Brown, Chrmn. County Commrs.

N. C., Oxford—Road—Granville County sold \$150,000 of 6 per cent 25 yr. road bonds to, Prudden & Co., Toledo, O., at 99.33 and interest. (Lately noted inviting bids.)

N. C., Pilot Mountain—Electric—City will vote Nov. 7 on \$65,000 electric light bonds. Address The Mayor. (Lately noted.)

N. C., Randleman—Improvement—Board of Alderman receives bids Oct. 24 on \$6,600 of 6 per cent semi-annual \$100 denomination improvement bonds; Ernest Talley, City Clk.

N. C., Red Springs—Water and Electric—Town, Hiram Grantham, Mayor, receives bids Oct. 25 on \$50,000 of 6 per cent semi-annual \$1000 denomination water and electric bonds, dated Oct. 1, 1920.

N. C., Salisbury—School—Board of Alderman sold \$250,000 of 6 per cent semi-annual \$1000 denomination school bonds, dated Oct. 15, 1921 to Provident Savings and Trust Bank, Cincinnati; G. M. Lyerly, City Clk. (Lately noted inviting bids.)

N. C., Stantonburg—Electric—Town plans issuing \$20,000 electric light bonds; G. L. Hill, Clk.

N. C., Trenton—School—W. W. Baker Chrmn. School Board voted school bonds.

N. C., Wake Forest—Water—Town, J. G. Mills, Mayor, will receive bids until Nov. 1 on \$50,000 of 6 per cent semi-annual \$1000 denomination water bonds, dated April 1, 1921.

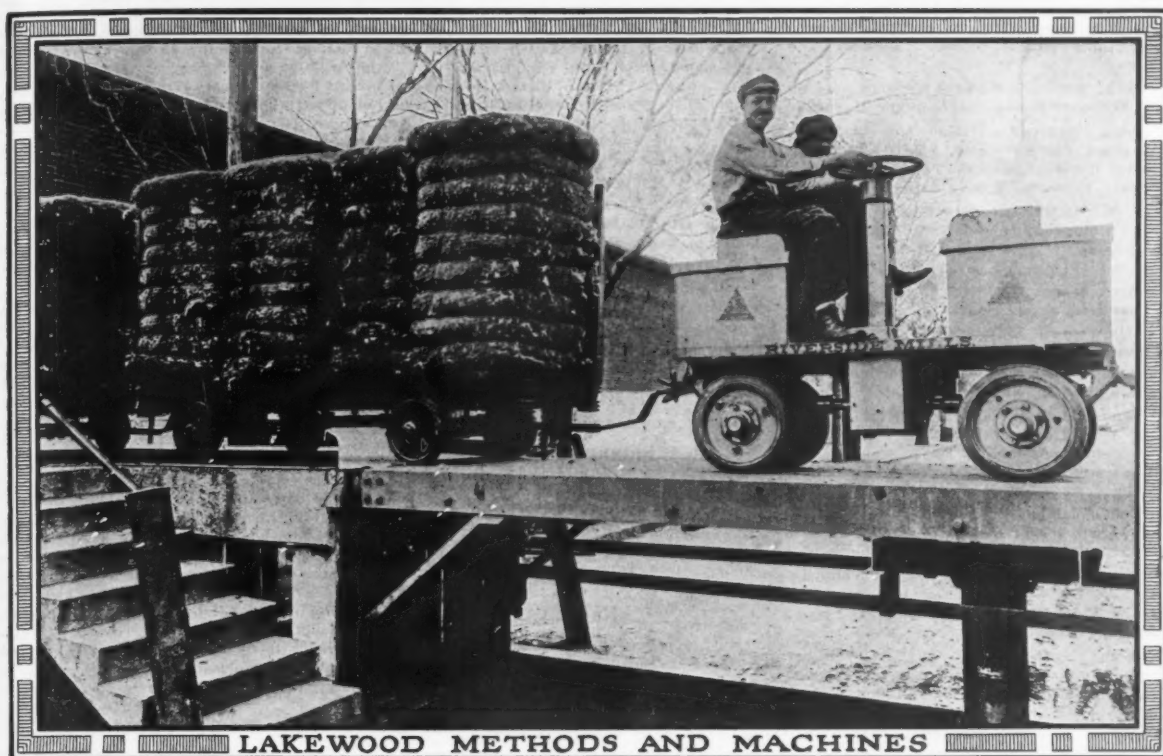
N. C., Washington—Street—Board of Alderman will receive bids until Oct. 28 on \$200,000 of 6 per cent \$1000 denomination street improvement bonds, dated Nov. 1, 1921; J. R. Meekins, Clk.

Okl., El Reno—School—El Reno School Dist. sold \$214,000 bonds to Commercial Bank. (Lately noted.)

Okl., Enid—Water and City Hall—City voted \$275,000 bonds including \$215,000 convention hall and \$60,000 water. Address The Mayor. (Lately noted to vote.)

Okl., Pawhuska—Road—Chamber of Commerce interested in issuance of 1,500,000 road bonds.

Okl., Pawnee—Sewer—City sold \$18,000 sewer bonds to Sinking Fund of City at par and interest. (Lately noted inviting bids.)

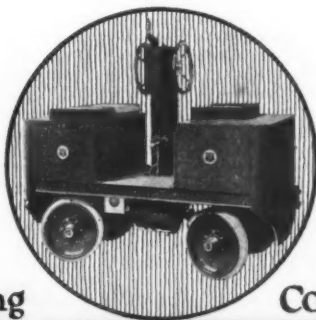


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Okl., Purcell—City voted \$12,500 municipal improvement bonds. Address The Mayor.

Okl., Sulphur—Water—City may vote on \$25,000 water bonds. Address The Mayor.

Okl., Wagoner — Road and Bridge — Wagoner County voted \$45,000 road and bridge bonds of Shannon Township. Address County Commrs. (Lately noted to vote.)

S. C., Charleston—Sewer—City will vote Nov. 8 on sewer bonds; T. W. Young, Board of Suprs.

S. C., Charleston—Sewer—City will vote County School Dist. No. 4 sold \$100,000 of 6 per cent school bonds to, J. F. Durrett, Atlanta, Ga., at par. (Lately noted.)

Tenn., Kingston—Road—Roane County reported to have sold \$225,000 road bonds to Caldwell & Co., Nashville.

Tenn., Maryville—School—Blount County will receive bids until Nov. 12 on \$50,000 of 6 per cent semi-annual 20-yr. school bonds, dated Nov. 15; R. P. McReynolds, County Judge.

Tenn., Memphis—School—City sold \$250,000 of 5½-yr. school bonds to Harris Trust & Savings Bank, Chicago, Ill.

Tenn., Nashville—Water and Viaduct—City, Felix Wilson, Mayor, will vote Nov. 17 on \$1,800,000 water and \$375,000 viaduct bonds. (Lately noted.)

Tenn., Newport—Road—W. B. Stanbery Chmn. County Court will receive bids until Nov. 7 on 6 per cent bonds as follows: \$100,000 of 10-19 yr. serial highway and \$200,000 of 10-29 yr. serial highway.

Tex., Bryan—Bridge—Brazos County will vote Nov. 5 on \$100,000 bridge bonds; H. O. Ferguson, County Judge. (Supersedes recent item.)

Tex., Clarendon—School—Donley County Common School Dist. No. 9 registered \$13,000 of 6 per cent 10-40-yr. bonds with State Comptroller.

Tex., Clarksville—Paving—City sold \$50,000 paving bonds; Roy Goodwin, City Clk.

Tex., Comanche—Attorney Generals Dept., Austin, Tex., approved \$110,000 of 6 per cent school bonds of Independent School Dist.

Tex., Cooper—Levee—Attorney Generals Dept., Austin, Tex., approved \$77,000 of 6 per cent serial Delta County Levee Improvement Dist. No. 8 bonds; J. H. Beery, County Judge, Cooper.

Tex., Dallas—Attorney General's Dept., Austin, Tex., approved \$2,700,000 Dallas County 5½ per cent serial road bonds.

Tex., Eagle Pass — Street — J. L. Arlitt, Austin, Tex., purchased \$40,000 of 6 per cent street bonds, of City of Eagle Pass., Tex., dated June 1, 1921.

Tex., Henrietta—Sewer—J. L. Arlitt, Austin, Tex., purchased \$35,000 city of Henrietta, Tex., 8 per cent sewer construction warrants, dated Mar. 1.

Tex., Houston—Street and Bridge—City plans issuing \$100,000 street and bridge bonds. Address Mayor Holcombe.

Tex., Jacksboro—Water and Sewer—City voted \$65,000 sewer and \$5,000 water bonds. Address The Mayor.

Tex., Kaufman—Kaufman County Improvement Dist. No. 1 registered \$75,000 of 6 per cent serial bonds with State Comptroller on Oct. 7.

Tex., McKinney—School—Collin County Common School Dist. No. 9 registered \$20,000 of 5½ per cent serial bonds on Oct. 3.

Tex., Paris—Lamar County Improvement Dist. No. 1 registered \$354,000 of 6 per cent serial bonds with State Comptroller.

Tex., Plainview—Plainview Independent School Dist. registered \$50,000 of 6 per cent serial bonds with State Comptroller.

Tex., Ranger—School—Ranger Independent School Dist. registered \$250,000 of 5 per cent serial bonds with State Comptroller.

Tex., Tahoka—Road—Lynn County registered \$60,000 of 5½ per cent serial road bonds with State Comptroller.

Tex., Tulla—School—Independent School Dist. voted \$125,000 school bonds. Address Board of Education. (Lately noted.)

Va., South Norfolk (P. O. Norfolk)—City will issue \$300,000 bonds. Address The Mayor.

W. Va., Salem—School—Salem Independent School Dist. sold \$75,000 school bonds, dated Jan. 15, 1921 to Empire National Bank, Clarksburg, W. Va.

Financial Notes.

City National Bank, Tuscaloosa, Ala., will increase capital from \$100,000 to \$150,000.

Security State Bank, Tulsa, Okla., will increase capital from \$100,000 to \$200,000.

Railways.

Md., Jennings—Northern Maryland & Tidewater Railroad Co., capital stock \$100,000, has been incorporated to build and operate a standard gauge railroad from Jennings, Md., to Salisbury, Pa., about 15 mi. Incorporators Elijah Livengood, Meyersdale, Pa.; Uriah M. Stanton and Chas. A. Bender, Grantsville, Md.; R. J. Ross, Westernport, Md.; Daniel W. Livengood, Salisbury, Pa.; Wm. E. Ambrose, Cumberland, Md.

S. C., McClellanville—McClellanville & Santee Railroad Co., of McClellanville, is chartered with capital stock \$50,000, to operate a line from McClellanville to Jamestown, S. C., about 20 mi. Ira Johnson, of Baltimore, Md., Prest. R. M. Lofton, of McClellanville, S. C., Vice-Prest.; J. C. Johnson, of Baltimore, Secy. & Treas. The Johnsons own practically all the stock. Company will build line with its own forces. Connects with Seaboard Air Line at Jamestown.

Tex., Amarillo.—Frank Kell of Wichita Falls, Tex., and associates are reported planning construction of a railroad from Amarillo through the natural gas fields to some point in Oklahoma. Estimated cost \$3,000,000.

Trade Literature

Cyclopedia for Contractors, Engineers, Etc.

"The Material Handling Cyclopedia, issued by the Simmons-Boardman Publishing Co., Woolworth Building, New York, is a large volume of 846 pages, 11½ by 8½ inches, which presents in compact and immediately accessible form detailed and practical working information concerning the great variety of types of material handling devices now in use. Its publication has been undertaken at the instance of the engineering departments of sundry manufacturers of material handling machinery and also of terminal and industrial engineers with the thought that it will fill a long felt want. It not only gives information about machinery but also about the methods of using it for handling material. Heretofore this kind of data and other information had to be obtained from widely separated sources and at much inconvenience; now it is right at hand in the pages of one book. The defini-

tion section at the beginning is a most valuable feature, for it serves the double purpose of a dictionary of terms and of an index to the contents. There is an abundance of illustrations and also a catalog section, besides an index of general subjects. The price of the book bound in cloth is \$10; in leather, \$15.

General Sales Manager Appointed.

Sidney G. Down has been appointed general sales manager of the Westinghouse Air Brake Company of Pittsburgh, with headquarters at Wilmerding, Pa. He has been located at San Francisco and for the last ten years as Pacific district manager for the company and also as president of the Westinghouse Pacific Coast Brake Co. In his new position he will also be in general charge of sales for the Westinghouse Traction Brake Co.

Nursery Products.

A fine catalog for 1921-1922 has been issued by the Fruitland Nurseries, successors to P. J. Berckmans Co., Inc., Augusta, Ga., the proprietors now being Baile & Gwin. This establishment was founded in 1856 and it is the announced purpose of the management to carry out the ideas and policies which have distinguished the business throughout its entire history of 65 years. The book, which is finely illustrated, presents complete and interesting information concerning each of the products of the nurseries.

Tube Welding Machinery, Etc.

Tube welding machinery and fabricating equipment are displayed effectively and fully in a bulletin issued by the Davis-Bournonville Company, manufacturers of oxygen, hydrogen and acetylene plants, welding and cutting apparatus, Jersey City, N. J. It is remarked that this is believed to be the first publication issued by a manufacturer listing machinery for producing welded tubing from commercial steel sheets, or rolled strip stock, and also briefly describing the process. The bulletin is amply and accurately illustrated. Copies may be obtained on request.

Garbage Incinerators.

A twenty-four page booklet issued by the Superior Garbage Incinerator Company, Praetorian Building, Dallas, Texas, presents sundry testimonials from different cities as to the efficiency of the Stokes furnace which burns garbage, and other city refuse, including dead animals. It is stated that the furnace is operated and maintained at low cost and that its use is with freedom from odors. Dead animals, even horses and mules have been burned in these incinerators in places where the law requires that such offal shall be either burned or buried to avoid disease. The company designs and builds these incinerator plants and illustrations of some of them appear in the booklet.

Drying Machinery for Textile Plants.

A new line of textile drying machinery is described in a general way in a new booklet just issued by the Grinnell Company, Providence, R. I. manufacturers of such equipment. The publication presents a brief outline of the operative principle and the structural features of this machinery which is designed to meet every drying need in the textile field of industry. There are automatic yarn dryers, stock dryers and looping dryers for handling different kinds of material and goods, also cabinet dryers and truck yarn dryers, besides complete automatic carbonizing systems for cloth, and drying systems applied to tentering frames.

Fabricators Stock Steel Joists In Mill Lengths

NATIONAL STEEL JOIST sections are shipped in long lengths to structural steel fabricating companies throughout the United States. Delivery to the construction job is made from these stocks, every piece sawed to the exact length specified, painted and ready in every way to be set in place.

With these sturdy, light, steel joists is constructed the modern fireproof floor for Office Buildings, Stores, Apartments, Schools, Hotels, Hospitals, Residences, etc.

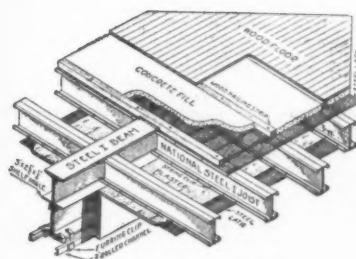
During construction of a building, steel joists represent but a small part of the total cost. When the building is completed they are covered up by ceiling plaster and floor surface. Made to serve unseen, they yet form the structural or supporting members of part of a building which takes the main burdens and wear of occupancy.

In fifteen years this product has set the standard for Permanency, Strength and Incombustibility in building construction.

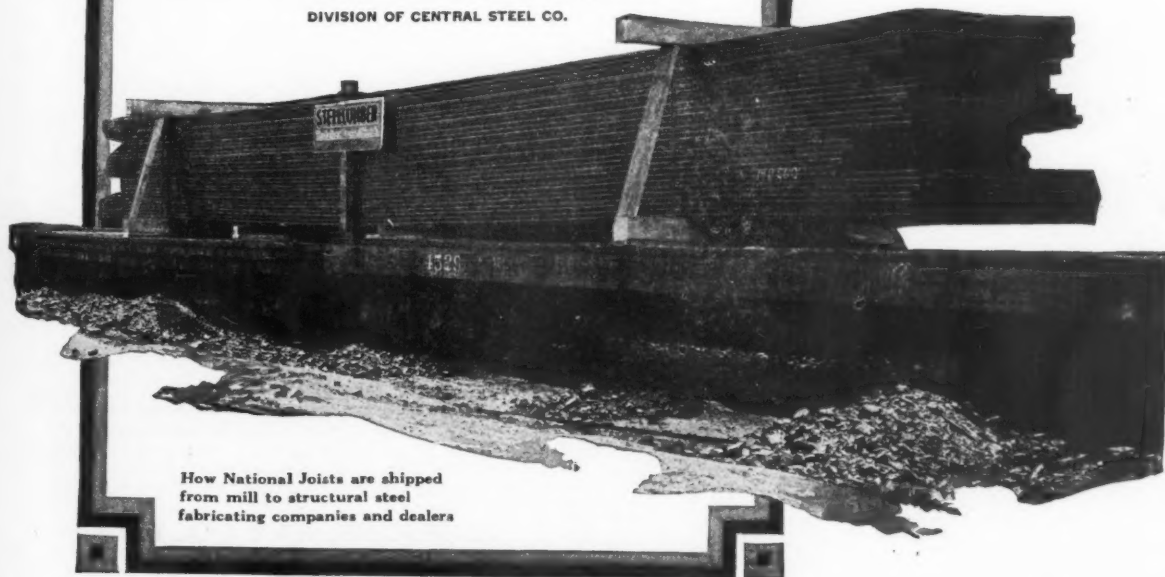
Write for a copy of brochure on comparative costs of fireproof construction.

The NATIONAL PRESSED STEEL CO.
MASSILLON, OHIO

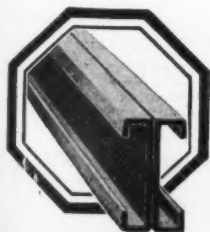
DIVISION OF CENTRAL STEEL CO.



Detail of Steel Joist Full Fireproof Floor Construction



How National Joists are shipped from mill to structural steel fabricating companies and dealers



NATIONAL STEEL JOISTS

FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking for information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

Shortcomings of American Manufacturers Who Seek Foreign Trade.

An American residing in New Zealand, in a letter to the Manufacturers' Record, discusses some of the shortcomings of American manufacturers in their efforts to secure foreign trade. He writes: "I have been making a drive for better action among the agents in my own district, and have succeeded in getting just four registrations out of what I judge must be two hundred agents for American firms in Auckland alone. Without a sudden show of interest by the manufacturer himself, I am convinced that there will be no further notice taken of coaxing publicity in the newspapers and other efforts to bring the agents out of their chairs. I am therefore attaching a questionnaire to be published (if you do not think it too Bolshevik) in your magazine, which reaches, I believe, most of the firms I am trying to help without their knowledge. These questions are the result of an intensive investigation into local conditions. "The worst phase is all contained in the first question. How any manufacturer can do any export trade at all with some of the ignoramuses at the head of some of the export departments, is beyond me. Agents blithely appointed in Australia are ten days from New Zealand (round trip) and some of the firms expecting big business in New Zealand have been calmly told "poor business," whereas the agent never attempted to communicate with New Zealand." The questions submitted for consideration by American manufacturers are as follows:

QUESTIONNAIRE FOR THE EXPORTING MANUFACTURER.

BY JUSTA YANK.

1. What is the policy of your export department—contemptuous ignorance of geography?
2. Didn't the letter addressed to John Jones, Ltd., New Zealand, Australia, come back undelivered? Important was it not?
3. When you addressed that letter to Jim Smith, Heidelberg, U. S. A., did you expect the postman to know you wanted it to go to the Union of South Africa?
4. Are you taking advantage of the information section of the Bureau of Foreign and Domestic Commerce at Washington? OR—
5. Are you expecting immediate reply to your little request on the American Consul for a complete survey of his district politically—radically and financially, with "a few comparative statistics please"?
6. Are your foreign agents LIVE ones? What makes you think so?
7. Is this agent "SITTING" on his agency merely to quash competition with the mother country? What makes you think he is not?
8. How many agencies from your competitors is he sitting on at the same time? Why do you think yours is all?
9. How many agencies in the same line from other countries does he hold, to the detriment of yours?
10. How does your agent stand geographically in respect to his territory? Australia and New Zealand? India and Ceylon? Singapore and Java? Cape Town and Durban?
11. How do you know he didn't grab the agency in the other district to avoid competition with another liver man?
12. Is your agent registered with the American Consul, so that inquiries for your brand can be promptly handled? How do you know he is?
13. How often does your agent cover your territory? Do you know that some agents have never been seen in the territory they are supposed to cover, and from which they consistently report "poor business"? Do you know whether they ever intended to cover that territory?
14. Do you think that because a country is rated at a certain population you are justified in demanding a minimum sales clause in a agency contract? Do you realize that a DOZEN well placed is worth ten times that minimum sales bank?
15. Do you expect to sell without advertising campaigns what you wouldn't dare to start without advertising in the United States? Isn't publicity worth just as much in China and South Africa as it is in Mexico?

IN OTHER WORDS, Mr. Exporting American Manufacturer, SNAP-QUOTOFIT. Your trade is going to the fellows who are fifty years ahead of you in knowledge of the foreign market. REVISE your musty methods of appointing agencies. Investigate 'em personally as you do in the United States, or by an advertising and service man hired by you on the ground. If the market is worth anything at all to you, there should be a TRAVELLING EXPORT AGENCY SUPERVISOR on your staff, with power to cancel agencies "gone dead", and appoint new men with vision. Agencies need "punching" supervision. It is very easy to get a friend "just travelling" to keep an open eye for you. It just as easy to get a report through the Bureau of Foreign and Domestic Commerce on the activity shown by any one foreign agent you desire. If he is registered with the American Consul, he and the Consul are usually pretty good friends, and the man is absorbing American methods. If he isn't—well it won't do him any harm to come into contact with the Consul,—or perhaps he has reason to avoid such acquaintance?

AMERICAN FOREIGN AGENCY METHODS MUST BE REVISED OR OUR TRADE WILL BE QUIETLY SQUASHED BY THE "SITTER"!

Food Products, Lumber, Etc., and Coal.

MARCEL SUPPLEMENT, Fort-de-France, Martinique.—I would like to augment the scope of my operations with the aid of a credit of 90 days, or better of 120 days, with some reputable houses in your country who would be willing to enter into arrangements whereby

all transactions are to be offered to the Bank of Martinique, and furthermore, I would like to have relations with firms willing to ship their products on consignment and of products that can be warehoused and of current sale, such as food products, lumber or construction material, coal, etc. I would guarantee these consignments with a sum of money which I would deposit in a New York bank, corresponding to the total value of the goods entrusted to me. Among the articles which I have for export are medicinal herbs, castor oil plants, cassia, sarsaparilla, etc.

Fruit-Drying Machinery

QUINTIN E. CALCANCO, Apartado No. 51, Tapachula, Chio., Mexico—I am interested in evaporating machines for drying fruits. I will appreciate the names and addresses of firms manufacturing such machinery.

Farm Implements, Machinery, Etc.

W. CHENEVARD, Tunis, North Africa.—I am interested in every phase of agriculture, farming and farm specialties. I will undertake the representation of American firms, which due to the quality of their goods or the advantageousness of their prices, might desire to do business in Northern Africa (Algeria, Tunis, and Morocco).

Grey Sheetings

BENSUSSAN & SIDES, Salonica, Greece.—We should be greatly obliged for a list of names of the most important manufacturers and exporters of the United States able to export on a large scale grey sheetings CCC, 36 inches wide, 48 x 48, 3 yds to the pound, 40 yds pieces, to be delivered c.i.f. Salonica (including all war risks) packing free, net cash by an irrevocable and confirmed credit opened with a first class Bank in New York, payable against shipping documents.

Would Sell American Goods.

SUNDRAM & SONS, 16, Barr Street, Rangoon, Burma.—We are prepared to handle many kinds of articles, provided terms and conditions are feasible, workable and profitable. We need hardly add that financial conditions at this end are unprecedented—as is everywhere—and if we can develop correspondence before the return of normal conditions a vast business could be assured. Particularly, our object is to take up agencies or represent some big American firms not already represented in this country.

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Manufacturing Bank Stationers

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President

OUR experience of more than a half century of service to buyers of printing should be of some value to you in solving your printing problems. It will pay you to consult us when in need of such service.

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**The Officers of Counties, Cities, School,
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are invited to confer with our Buying Department in reference to needed money for public improvements, or for refunding outstanding obligations. We purchase bonds or other evidences of indebtedness for such purposes.

All information will be cheerfully furnished upon request.

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INDUSTRIAL COMPANIES***Correspondence Invited***Lawrence Chamberlain & Company**

115 Broadway (Incorporated) New York

NOTICE TO CONTRACTORS

We want to buy bonds issued by cities, towns, counties, school, road or drainage districts that you may be able to take in exchange for work. Address us at our nearest office.

W. L. SLAYTON & CO.New Orleans, La. Toledo, Ohio Tampa, Fla.
Chicago, Ill. Glasgow, Mont.**HAVE YOU BONDS FOR SALE?**

WE BUY ALL CLASSES OF MUNICIPAL BONDS,
INCLUDING CITY, COUNTY, SCHOOL,
PAVING, ROAD AND DRAINAGE

The Hanchett Bond Co. Inc.

39 SOUTH LA SALLE ST., CHICAGO

WE BUY MUNICIPAL BONDS

We are interested in the purchase of
Southern Municipals including road,
school, county, drainage and levee bonds.

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Southern Trust Bldg. Little Rock, Ark.

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J E CONANT & CO
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of LOWELL MASSACHUSETTS

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—when properly carried through

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Gas Oils	Car Oil	Cup Grease
Spindle Oils	Fuel Oils	Gear Grease
Motor Oils	Diesel Fuels	Axle Grease
Engine Oils	Bunker Oils	Solid Lubricants
Machine Oils	Cylinder Oils	Petroleum Coke
Dynamo Oils	Cylinder Stocks	Metal Polishes
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There is a TEXACO LUBRICANT for EVERY PURPOSE

Experienced Man Wanted for Cannery.

R. A. BRADHAM, Sumter, S. C.

I desire to establish a cannery that will take care of the vegetables and fruits that myself and others are amply able to furnish. We have no experienced cannery men in this section and our first need is to get in touch with a canning man of real ability, who has the experience of handling the entire proposition—from coaching the farmers on what, how and when to plant to selling the finished products. I would also like a man who is able to put some of his own money in the plant, sufficient to insure his best endeavors.

I am a large holder of farm lands, which are situated from two to four miles from Sumter. I have decided to absolutely break away from cotton, as the growing of cotton has proved a money-losing proposition.

September Tobacco Sales Report

The tobacco markets operating in North Carolina during September showed 42 warehouses and 14 markets less than were operating last year, as reported to the States Cooperative Crop Reporting Service. Sales during the month were about 7,000,000 pounds less than sold during September last year, but the price of sales averages about 3c per pound higher. The 1921 production is only 45.4 per cent compared with last year, and to date, only 28.4 per cent of the crop has been marketed. Farmers are watching the markets closely and the small amount on the floors, bears evidence to the greatly reduced crop.

Motor Trucks Would Supplant Railroads.

At least one industrial enterprise is preparing to protect the continuity of its operations if a railroad strike occurs. The Black & Decker Manufacturing Co., Baltimore, Md., in a circular announcement says:

"It is obvious that the responsibility for the continuation of business during the threatened railroad strike will be thrown upon the motor truck and motor car. So far as we are concerned, we are having three of our larger trucks overhauled and put into A-1 condition for use in making deliveries any place east of Chicago. Many others are doubtless doing the same, and if the necessity becomes acute there will doubtless be tremendous activities along these lines and if the trucks and automobiles take over the load of the railroads during the strike a tremendous amount of auto and truck repair and service work will result, as well as tremendously increased business for filling stations and the automotive trade generally. This promises a demand for auto-repairing equipment. * * * We have already made large shipments of stock to our various branch offices."

A report from New York says that more than 1,000,000 motor trucks can be mobilized to avert famine conditions in the event of a railroad strike and at least 9,000,000 passenger automobiles could also be used to transport food, according to F. W. Fenn, secretary of the National Automobile Chamber of Commerce. He also said that 10,000 freight truck lines operating between various points could triple their tonnage at a moment's notice and that the 10,000,000 motor vehicles in the country were being prepared for instant mobilization.



PROPOSALS

BOND ISSUES
BUILDINGS
PAVING
GOOD ROADS

Bids close Nov. 7, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., Oct. 17, 1921.—**SEALED PROPOSALS** will be received and opened in this office at 3 p. m., Nov. 7, 1921, for furnishing materials and labor required for constructing mezzanine floor in the U. S. Post Office at Baltimore, Md. Drawings and specifications may be obtained from the Custodian of the site at Baltimore, Md., or at this office in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close November 18, 1921.

PROPOSALS FOR the installation of automatic sprinkler equipments in Hotel Tivoli, Administration Building, and Electrical Storehouse, Canal Zone.—Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 o'clock a. m., November 18, 1921, at which time they will be opened in public, for installing the above-mentioned automatic sprinkler equipments. Blanks and information relating to this Circular (1460) may be obtained from this office or the offices of the assistant purchasing agent, 24 State Street, New York City; 606 Common Street, New Orleans, La.; and Fort Mason, San Francisco, Calif.; also from the United States Engineer offices in the principal cities throughout the United States.—A. L. Flint, General Purchasing Officer.

Bids close November 10, 1921.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., October 13, 1921.—**SEALED PROPOSALS** will be opened in this office at 3 p. m., November 10, 1921, for construction of a kitchen and mess hall building for the United States Public Health Service Hospital at Fort Logan H. Roots, North Little Rock, Arkansas. Drawings and specifications may be obtained from the Superintendent of Construction at Fort Logan H. Roots, or at this office in the discretion of the Supervising Architect, Jas. A. Wetmore, Acting Supervising Architect.

Bids close Nov. 7, 1921.

NOTICE TO CONTRACTORS—Sealed proposals for constructing or improving the James River National Forest Road project located within or partly within the Natural Bridge National Forest, State of Virginia, Counties of Amherst and Rockbridge, will be received by the District Engineer, Bureau of Public Roads, U. S. Department of Agriculture, at Washington, D. C., until twelve o'clock noon on the seventh day of November, 1921, at which time and place they will be publicly opened and read. The right is reserved to reject any and all bids, and none will be considered except those from contractors ascertained to be experienced and responsible.

The length of project to be constructed or improved is approximately 6.7 miles, and the principal items of work are approximately as follows: 355 stations clearing and grubbing, 70,000 cubic yards unclassified excavation, 25 cubic yards Class A concrete, 130 cubic yards Class D concrete, 1,000 pounds reinforcing steel, 300 cubic yards cement rubble masonry, 5,000 feet B. M. bridge flooring, erecting two military steel truss bridges, each 46 feet in length, distributing and placing 2,350 lineal feet of cast iron culvert pipe.

The work embraced in this contract shall be completed within 180 weather working days following the execution of the contract by the Secretary of Agriculture.

The contract form and the maps, plans, specifications and estimates of quantities may be examined by responsible contractors at the following addresses:

Office of Vernon M. Peirce, District Engineer, 506 Willard Building, Washington, D. C.
Office of J. C. Carpenter, Senior Highway Engineer, 1014½ East Main Street, Richmond, Virginia.
Office of D. L. MacBeath, Superintendent of Road Construction, Glasgow, Virginia.
Office of J. H. Fahrenbach, Forest Supervisor, Buena Vista, Virginia.

All proposals must be made on forms, and in accordance with instructions, forming a part of the specifications above re-

ferred to, and must be accompanied by a proposal guarantee in an amount at least equal to five (5) per cent of the total amount of the proposal.

VERNON M. PEIRCE,
District Engineer.

Bids close Nov. 21, 1921.

\$100,000.00 6% Road and Bridge Bonds.

Chipley, Fla.
Notice is hereby given that sealed bids will be received by the Board of Bond Trustees of Special Road and Bridge District No. One of Washington County, Florida, until 12 o'clock noon, Monday, November 21st, 1921, for the sale of One Hundred Thousand Dollars (\$100,000.00) bonds of said District, bearing six per cent (6%) interest, payable semi-annually, on the first day of January and July, and said bonds being dated July 1st, 1921, and maturing thirty years after date, and being of the denomination of Five Hundred Dollars (\$500.00) each, principal and interest being payable at the National City Bank, New York, N. Y.

The bonds are authorized by Chapter 8861, Laws of Florida, 1921, for the purpose of building a system of roads, culverts and bridges in said District, and for paying over to the Town of Chipley in said District Twenty Thousand Dollars (\$20,000.00) of the proceeds of said bonds for improving and constructing the roads and streets of said Town.

Each bid must be accompanied by a certified check payable to the Chairman of said Board of Bond Trustees in the sum of One Thousand Dollars (\$1,000.00) as a guarantee of good faith.

The Board of Bond Trustees reserves the right to reject any and all bids. Bids to be sent to C. B. Dunn, Chairman, Chipley, Florida.

Board of Bond Trustees,
Special Road and Bridge District
No. One of Washington County, Florida.
By C. B. DUNN,
Chairman.

Bids close November 16, 1921.

Reinforced Concrete Arch Bridges.

Sealed proposals will be received up to two thirty P. M. of Wednesday, November 16, 1921, by the Commissioners of the Broadway-Main Street Bridge District, at their office in the Moore & Turner Building, in the City of Little Rock, Arkansas, for the construction of the superstructures of two reinforced concrete arch bridges across the Arkansas River. All of the substructure work, except that for the approaches, has been completed for the two bridges. One of these bridges will be located at Main Street, and the other at Broadway Street, in the City of Little Rock, Arkansas. All bids will be opened in public at place and hour named.

Bids may be submitted either on a lump sum basis or upon a cost plus fee basis. All bids are to be placed in envelopes, sealed and then marked thereon, "Proposals for Broadway-Main Street Bridges."

The Commissioners reserve the right to reject any or all bids. The Contractor will be paid in cash upon Engineer's estimate, approved by the Board, as the work progresses.

Each bid is to be accompanied by a certified check made payable to the Broadway-Main Street Bridge District on some responsible bank for a sum equal to two and one-half per cent of the amount of the bid or bids.

For further information, instructions to bidders, plans, specifications and forms for proposals, address:

Broadway-Main Street Bridge
District of Little Rock,
Pulaski County, Arkansas.

Showing the Financial Condition of Washington County, Florida, Which Offers For Sale \$31,000.00 Time Warrants, For Sale November 7th, 1921.

Vernon, Fla.

This is to certify that the financial condition of Washington County, Florida, is as follows:

Five Thousand Dollars interest bearing Time Warrants, due December 6th, 1921, with money on Time Deposit in the Chipley State Bank, Chipley, Florida, to retire this block, together with interest.

Five Thousand Dollars due December 6th, 1922, with the taxes already assessed and levied to retire these warrants; therefore, Washington County has only Five Thousand Dollars indebtedness, and this amount has already been provided for.

A Conservative estimate of the value of Washington County taxable property is Six and One half Million Dollars, the assessed valuation is Two Million One Hundred Sixty Thousand Dollars.

Given under my hand and official seal this the 17th day of October A. D. 1921.

A. G. McQUAGGE,
Clerk Circuit Court and
County Auditor.

Bids close November 7, 1921.

\$31,000 6% Time Warrants.

NOTICE OF CHANGE OF DATE

Vernon, Fla.

On Monday November 7th, 1921, at 1 o'clock P. M. at Vernon, Florida, the Board of County Commissioners, of Washington County, Florida, will sell, Thirty-One Thousand Dollars Time Warrants, bearing interest at the rate of Six per cent, interest payable annually; Warrants issued serially in denominations of One Thousand Dollars each, and payable at the National City Bank, New York, in from Two to Eleven years.

Sealed bids will be received at the office of the Clerk of the Circuit Court, up to 12 o'clock noon, October 3rd, and bidders will be required to accompany their bid with Cashier's check in the sum of One Thousand Dollars, as a guarantee of good faith.

For further particulars write to A. G. McQuagge, Clerk of the Circuit Court, Vernon, Florida.

THE BOARD OF COUNTY COMMISSIONERS, WASHINGTON COUNTY, FLORIDA.

BY A. D. CAMPBELL,
Chairman said Board.

Attest:

A. G. McQuagge,
Clerk.

Little Rock, Ark.

Bids close November 1, 1921.

Store Building

Chattanooga, Tenn.

Bids wanted for erection of six-story and basement store building for Clemons Bros., Chattanooga, Tenn. Plans and specifications can be had by applying to the Architect, Louis H. Bull, 436-7, Volunteer State Life Bldg., Chattanooga, Tenn. A deposit of ten dollars (\$10.00) will be required for each set of plans, to be returned when plans are returned in good condition; all bids to be in the Architect's office by not later than 12 o'clock noon, Tuesday, Nov. 1, 1921.

Bids close Nov. 2, 1921.

Sewer Construction.

Monroe, La.

Sealed bids will be received by the City Council of the City of Monroe, Louisiana, up to eleven (11) o'clock, A. M., Wednesday, November 2, 1921, for the construction of sanitary and storm sewers, according to plans and specifications now on file in the office of R. S. Reynolds, City Engineer.

Bids will be received on the work as a whole, or separately, under the following sub-divisions:

- (A)—General contract for sanitary sewers;
- (B)—General contract for storm sewers;
- (C)—Furnishing castings;
- (D)—Furnishing concrete pipe;

The work includes about twenty-six (26) miles of 8-inch laterals and about six (6) miles of trunk sewer from 10-inch to 36-inch, in the sanitary system, and about one and one-half (1½) miles of storm sewers, 24 inches to 78 inches in diameter, together with all man-holes, flush-tanks, inlets, etc.

Plans and specifications may be secured from the office of the City Engineer, upon the deposit of \$15.00 to secure the return of same in good condition.

Each bid must be accompanied by certified check in the amount of five per cent (5%) of the amount of the bid to guarantee good faith of bidder and the execution of contract and bond, which deposit will be returned to all unsuccessful bidders upon rejection of their bids and to the successful bidder when contract and bond are properly executed.

The right is reserved to the City of Monroe to reject any and all bids.

All bids shall be addressed to the undersigned.

P. A. FOAG,

Secretary, City of Monroe, Louisiana.

Bids close November 8, 1921.

\$240,000 Road Bonds.

Bushnell, Fla.

Notice is hereby given, that W. N. Potter, Clerk of the Board of County Commissioners of Sumter County, Florida, will receive bids up to 12 o'clock noon of Tuesday, November 8th, 1921, at his office in Bushnell, Florida, for \$240,000.00 worth of the \$750,000.00 County Road Bonds of Sumter County, Florida said Bonds being dated January 1st, 1920 and maturing as follows; twenty of said Bonds January 1st, 1948 and twenty of said Bonds on the First day of January of each year thereafter, up to and including, January 1st 1959. Said Bonds being in the denomination of \$1,000.00 each, interest payable semi-annually and drawing interest at the rate of 6%, interest payable on the First day of January and July of each year.

Bidder to accompany his bid with certified check for 2% of the amount bid as evidence of good faith.

The County Commissioners reserve the right to reject any and all bids.

W. N. POTTER,

Clerk Board of County Commissioners,
Sumter County, Florida.

Bids close November 8, 1921.

\$400,000 6% Road Bonds.

Key West, Fla.

The Board of County Commissioners of Monroe County, Florida, will receive bids for the purchase of \$400,000 of Monroe County road bonds. Bonds to be in the denomination of \$1000 each, and to bear interest at the rate of 6 per centum per annum, interest coupons payable semi-annually. The principal of the bonds payable 30 years from date of bonds. The bond issue has been authorized by an election of the qualified electors of Monroe County, and validated by decree of the Circuit Court. The County has less than \$200,000 indebtedness. Assessed valuation of taxable property of Monroe County is nearly \$5,000,000.

Any and all bids may be rejected if the County Commissioners deem it for the best interest of the County. Address all communications to D. Z. Filer, Clerk, Key West, Fla. All bids must be submitted not later than 5:00 P. M. November 8th, 1921.

The County Commissioners require all bidders for the said bonds to accompany said bid with certified check for the sum of \$1000, payable to the Board of County Commissioners of Monroe County, Florida. The said check will be returned in case the bid is rejected. If accepted the amount will be applied on account of the payment of the amount bid for the bonds. Said check to be forfeited to the county in case the bid is accepted and the bidder fails to comply therewith.

Under the law no bid can be accepted for less than 95% of the par value of the bonds. Key West, Fla. October 7th, 1921.

D. Z. FILER,

Clerk Board of County Commissioners,
Monroe County, Florida.
By E. W. RUSSELL,
Deputy Clerk.

Bids close Nov. 2, 1921.

Street Paving.

Monroe, La.

Sealed bids will be received by the City Council of the City of Monroe, Louisiana, up to 11 o'clock A. M. Wednesday, Nov. 2, 1921, for street paving, according to plans and specifications now on file in the office of R. S. Reynolds, City Engineer. Bids are desired on the following types of paving:

- Bitulithic
- Portland Cement Concrete
- Asphaltic Concrete
- Sheet Asphalt
- Brick

The work comprises the following quantities:

- 42,000 sq. yds. paving
- 15,000 cu. yds. grading
- 22,000 ft. concrete curb and gutter
- 90 inlets
- 760 ft. 12" storm sewer
- 1,660 ft. 15" storm sewer

Plans and specifications may be secured from the office of the City Engineer, upon the deposit of \$5.00 to secure the return of same in good condition.

Each bid must be accompanied by certified check in the amount of five per cent (5%) of the amount of the bid to guarantee good faith of bidder and the execution of contract and bond, which deposit will be returned to all unsuccessful bidders upon rejection of their bids and to the successful bidder when contract and bond are properly executed.

The right is reserved to the City of Monroe to reject any and all bids.

All bids shall be addressed to the undersigned.

P. A. FOAG,
Secretary, City of Monroe, Louisiana.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

MEXICO

100 to 1,000 acres land located in the western part of the State of Tepic, Pacific Coast, Mexico, on the San Pedro River. In the heart of the oil formation on the Pacific Coast. The coming oil fields of Mexico, also good location for combination sugar plantations and stock ranches. Titles to the lands are good, a translated copy of the transcript to title will be furnished. E. George & Co., Inc., 407 Broadway, New York.

STONE QUARRY

FOR SALE OR LEASE—One of the oldest Quarries in Texas, Unlimited amount of Fine Building Stone. Has always been a Money Maker. Owner has to retire on account of ill health. Will not require large capital. Address, G. T. Allen, Leander, Texas.

COAL

AVOID COAL shortage and high prices later. Buy coal from us now and save money. Can furnish smokeless, splint, gas, by-product for your plant, home or retail yard. Write or wire for prices. MOORE & HETZEL, Charleston, W. Va.

COAL LANDS AND MINES

FOR SALE—2500 acres unimproved coal land in tracts, \$35 per acre; has several seams; top drift adjacent railroad, mines, gas and oil. Write Cavanagh, McAlester, Okla.

ANTHRACITE COAL LAND.

20,000 acres high grade anthracite, fee simple, 3 seams 3 to 16 feet, 35,000,000 feet timber, 12,000 acres fine orchard land. R. R. 2 miles. Nearest anthracite coal to tidewater. Price \$1,000,000. Expert reports and service. Yeatman, Pill & Smith, 2109 First Ave., Birmingham, Ala.

TIES, HANDLES, BLANKS, ETC.

FOR SALE

30,000 hewn ties, axe and plow handle blanks doubletree and neckyokes and all kinds rims in hickory and oak. B. H. TROXEL, Ravenden Springs, Ark.

LUMBER AND BUILDING MATERIAL

WHEN IN NEED of flooring, ceiling, siding, finish, roofers, lath, shingles and dimension; write Stephens Lumber Co., Jacksonville, Fla.; 50 E. 42d St., New York City or Hibernia Bank Bldg., New Orleans, La.

FOR SALE

1 carload
1"x5" and 1"x8", 3' 6"
and 3' 10"

LONG CLEAR

WESTERN PINE.
ANDERSEN LUMBER CO.,
South Stillwater, Minn.

YELLOW PINE LUMBER

From smallest mouldings to heaviest structural timbers: framing, flooring, ceiling, siding, finish, roofers, lath. In straight or mixed carload shipments. Let us quote you on your next bill.

C. G. HULL LUMBER COMPANY,
Laurel, Mississippi

TIMBER LAND

14,938 ACRES in fee on Apalachicola River in Florida. Thirty-five million feet Cypress Oak, Ash and Gum. Price \$7.00 per acre. Terms to responsible parties.

Thirty Million feet high grade Cypress, Poplar, Oak, Ash, Gum and Pine on Flint River in Georgia unlimited amount can be added direct from owners at a low price. Best mill location in State. Price \$75,000.00 on terms. Reason for selling have ten years cut for our mills other than these tracts.

REYNOLDS BROS. LUMBER COMPANY
ALBANY, GA.

TIMBER LAND

CHEAP TIMBER LANDS.

We have timber lands, well located. At prices cheaper than pre-war prices. One especially attractive tract for Mine-pros or keg staves. 575 acres all in growing timber. GOOD INVESTMENT PROPOSITIONS. BATTE & BROWDER, Jarratt, Va.

HARDWOOD TIMBER LANDS offered for 60 days at about half price. Urgent necessity compels this sacrifice. I own 14,500 acres in two boundaries and am compelled to sell this property before Jan. 1st, 1922. Address No. 5905, care Manufacturers Record, Baltimore, Md.

TIMBER OPERATION

FOR SALE—Lumber milling proposition, complete equipment, now in operation, Eastern Carolina; 25,000,000 feet timber: plenty more available; big bargain; \$175,000, half cash, balance terms. Address No. 5700 care Manufacturers Record, Balto., Md.

TIMBER

TIMBER FOR SALE.

From twenty to one hundred and fifty million feet, in separate tracts, of pine and of hardwood. Deal direct with owner. J. W. Barnes, Savannah, Ga.

FARM AND TIMBER LANDS

HUNTING PRESERVE FOR SALE
Produced \$20,000 Worth of Furs in 1919. Will sell in fee about 15,000 acres containing a large amount of high grade hardwood saw timber; also vast wealth suitable for pulp and paper making. Large variety of soils, much extremely fertile. Will make one of the best stock ranches in the South. Price an inducement. Address P. O. Box 1128, Wilmington, N. C.

SUBURBAN PROPERTY

FOR SALE

97 acres adjoining the City of Roanoke. Best lot sub-division; big money-maker; good terms act quick. Address No. 5876 care Manufacturers Record.

FRUIT, FARM AND TRUCK LANDS

FLORIDA

FLORIDA.—Did you ever think about Florida strawberries—marketed in December to May—potatoes, cabbage, lettuce, celery, etc., and the high prices they bring? We also ship in trainload the best oranges and finest grapefruit in the world. Send for 1921 list of groves and farms. Tampa West Coast Realty Co., Inc., opposite Post-office, Tampa, Fla.

LEARN of the Vale of Paradise, where dreams come true. This wonder city is having a magic growth, and a million dollars in municipal improvements are authorized for this year. Every kind of business opening here. We have seventeen miles of protected water front, with gorgeously beautiful home sites. Wonderful homes. Wonderful velvety lawns. Wonderful flowers in semi-tropical profusion. Fishing supreme. Every day you can catch the big fellows until your back aches and your hands blister. Paradise for motor boats, with hundreds of miles of protected waters with wonder spots to visit. Finest motoring roads in the South. Bathing in bay and gulf wonderful. Healthiest city in America, with no business for doctors. Greatest golf course in America under construction. Coolest place in America in Summer, delightful in Winter. You may own a beautiful home here, with a perpetual income, at practically no investment. Grasp the opportunity of a lifetime. Address THE MAYOR, Valparaiso, Fla.

GEORGIA

FARM FOR SALE.

If you want a real good farm write for full description of my 2,500 acres located on two railroads in Hazlehurst, Ga. Beautiful dwelling, good tenant houses. \$40, per acre. E. Lloyd Thomas, Hazlehurst, Ga.

FARM FRUIT, AND TRUCK LANDS

MEXICO

MEXICO RANCH—429,000 acres at 40¢ per acre. Terms. Timber is worth several million dollars. C. E. McGinnis, P. O. Box 722, Fort Worth, Tex.

MISSOURI

FOR SALE—1200 acres Mississippi River bottom in Ste. Genevieve County, Missouri, the richest land under the sun. 300 acres under high state of cultivation, three good houses, well and cistern water. Price \$30 per acre. John Herter, Ste. Genevieve, Mo.

NORTH CAROLINA

Nice farms for sale by the owner. These farms from 35 to 1250 acres of the finest farming land in the country. Our crops are tobacco, cotton, corn, oats, wheat, clover and stock. Fine grazing for the stock, meadows face bay. I am retiring from active business, hence these farms must go. J. G. Layton, Dunn, N. C.

TENNESSEE

FOR SALE—One acre of land with good 5-room frame dwelling, good barn, fine well, fruit trees, this property is especially adapted for a physician, splendid location, the community is in need of one. Price \$2000.

FARMS of all sizes for sale, fine section of country, land level and productive, strawberry culture very profitable, from \$300.00 to \$500.00 per acre is realized, land sells from \$40.00 to \$200. per acre. F. C. Enders, Portland, Tenn.

VIRGINIA

MOUNTAIN RESORT PROPERTY AND GAME PRESERVE. 1368 acres in Bath County, 10 miles from Hot Springs, Va., adjoining an estate of 108,000 acres and another of 30,000 acres. Buildings estimated to be worth \$100,000. Four fine mineral springs; good roads; adapted to blue grass. Bass and trout fishing; wild turkeys, pheasants, foxes, quail and deer abound. Ideal climate: sportsman's paradise. Price only \$35,000.00. Catalogue free. Oglesby Real Estate Agency, Inc., Lynchburg, Va.

BUSINESS OPPORTUNITIES

RIGHT PARTY with capital can acquire interest in large hardware and mill supply company in growing city. Must be experienced, progressive and with good executive ability, taking active part in the management as head of accounting or sales departments. Address No. 5909 care Manufacturers Record, Balto., Md.

MY ASSOCIATIONS with responsible New York Underwriters enables me to prepare your propositions in a manner which will demand their serious consideration. Attorney Alfred S. Perry, Fairfield, Conn.

ELECTRICAL BUSINESS requires additional capital to handle increasing amount of business. \$10,000 worth of 8% preferred stock to be sold. Proposition is sound and will stand thorough investigation. Details given to interested parties on request. Address Edmund G. Otto, treasurer, Hill, N. H.

FOR SALE—Twenty-five thousand dollars 6% first mtg. bonds, 20's issued April 1st, 1919. Wafford Shoals Lt. & Fr. Co. or will sell to right party one half int. in two high head water powers, one developed with 300 H. P. over loaded the other undeveloped. Reason, need finance for new development. W. B. Ellard, Cornelia, Ga.

BUSINESS OPPORTUNITIES

FOR SALE—New auto garage, size 30x60; gas and oil tank; blacksmith shop; garage and shop supplies, with tools and material; also 5 large lots set to orange trees; good trade; large territory. For information write Ike Chancey, Ft. Green, Fla.

A COMPLETE SAWMILL AND PLANING MILL OPERATION WITH ONLY A TIMBER INVESTMENT.

About EIGHT MILLION feet of extra fine Carolina Short Leaf Pine and about FIVE MILLION feet of Southern Hardwoods located on main line of the ATLANTIC COAST LINE RAILROAD, SOUTH CAROLINA RATE can be bought. Mills and Logging equipment complete furnished in lease at very reasonable rate. A REAL OPPORTUNITY, particulars on request. Address, No. 5904, care Manufacturers Record, Baltimore, Md.

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Effective—Convenient

Mail and messages promptly forwarded
Write us to day.

David C. Way, 42 Broadway, New York

FOR SALE—Lumber Milling Proposition, 5,000 acres in fee, complete equipment, now in operation. West Virginia. 15,000,000 feet of timber, 500,000 feet now on stick. This property will be sold at a bargain. Address Jno. C. Chidester, Weston, West Virginia.

BANK & LANDS—Controlling interest in going Natl bank, minor interest in 6 nearby banks, owners beautiful residence. Will include several fine farms. Address J. L. McKamey, Imboden, Lawrence Co., Ark.

Water works and electric plant to supply water and light to the suburb of a large City. Fine proposition. Address No. 5875 care Manufacturers Record.

I SPECIALIZE in industrial, warehouse and business sites at and adjacent to Washington, D. C.

M. B. HARLOW,
Harlow Building, Alexandria, Va. Colorado Building, Washington, D. C.

WANTED—A good-sized block of high-grade stock of exceptional earning possibilities to market among our large clientele. Money must be for expansion. Wiers & Co., 115 Broadway, New York Established 1894.

MERCHANDISE WANTED

SPOT CASH for surplus merchandise job lots, close-outs, discontinued lines, goods ordered and left on hand, etc. (no machinery). No quantity too large. Quick cash for real bargains. Fantus Bros., 529 S. Dearborn, Chicago, Ill.

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BETTER PRINTING for less money. Printing users send for free samples and standardized prices of a thousand items. E. Fantus Co., Printers 523 S. Dearborn St., Chicago, Ill.

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PATENTS.—Booklet free. Highest references. Best results. Promptness assured. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

JACK A. SCHLEY,
Patent and Trade-Mark Attorney,
306 Interurban Building, Dallas, Tex.
319 McGill Building, Washington, D. C.

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INVENTORS—Send sketch or model of your invention, for opinion concerning patentable nature, and exact cost of applying for patent. Book, "How to Obtain a Patent," sent free. Gives information on patent procedure and tells what every inventor should know. Established 25 years. Chandlee & Chandlee, 412 7th St. N. W., Washington, D. C.

PATENTS, TRADE-MARKS AND COPYRIGHTS.—Write for our Free Illustrated Guide Book and EVIDENCE OF CONCEPTION BLANK. Send model or sketch and description of your invention for our opinion of its patentable nature free. Highest references. Prompt service. Reasonable terms. Victor J. Evans & Co., 712 9th St., Washington, D. C.

BUSINESS PROPERTY

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WE SPECIALIZE IN

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Business Properties.

WEAVER BROS., 735 15th Street N. W.

FACTORY SITES

FOR SALE—100 H. P. Water Power Site ideal for interior woodworking or textile plant. Excellent concrete dam, part of steam auxiliary building with brick stack. Large lumber shed, two warehouses, excellent flowing well, in town of ten thousand, where plenty of good reliable labor is available. No other wood working or textile plant in town. For further particulars write G. C. Lewis, Watertown, Wisconsin.

ADA, OKLAHOMA FACTORY SITES FREE

CHEAP NATURAL GAS FOR FUEL

PLENTY OF PURE SPRING WATER

TWELVE DIFFERENT RAW MATERIALS

THE BEST LIVING CONDITIONS

EXCELLENT TRANSPORTATION FACILITIES

INVESTIGATION INVITED BY CHAMBER OF COMMERCE.

BALTIMORE

FACTORY

SITES

William Martien & Company.

1413 Lexington Bldg.,

Baltimore, Md.

INDUSTRIAL PLANTS FOR SALE

WOODWORKING PLANT.

FOR SALE—Industrial plant located on main line Southern Railway in city of High Point, N. C. Consists of several acres of land, two splendidly constructed factories, engine room, drying plant and equipment new machinery. Primarily a furniture factory, but well suited for any furniture specialty. Address Atlantic Bank & Trust Co., Greensboro, N. C.

SAND PLANT

FOR SALE—Sand Plant. In first class working condition. Economical to operate. Two men operate it. Dredge boat used on river with pump. On top stiff leg Derrick, one yard clam shell dipper, conveyor belt for loading cars. Big trade territory to cover. Cheap Gas and motor power for fuel. Price \$10,000—Easy terms. Apply to Burke Andrus Sand Co., Ft. Smith, Ark.

INDUSTRIAL PLANTS FOR SALE

COTTON MILL

SOUTHERN COTTON MILLS.
We have for sale two cotton mills.
One of 40,000 spindles.
One of 4300 spindles.
Write or wire for particulars.
F. C. ABBOTT & CO.,
Trust Building, Charlotte.

TIGHT BARREL HEADING PLANT

UNUSUAL OPPORTUNITY—Complete tight barrel heading plant in good condition located in Louisiana town of forty thousand—plenty cheap timber—will sell liberal terms to right parties—For sale and owned by a bank able to finance proposition. Address No. 5899, care Manufacturers Record, Balto., Md.

INCORPORATING COMPANIES

ARE YOU GOING TO INCORPORATE—reorganize or consolidate, are you planning to promote or finance any proposition? If so, write us for particulars. We render service everywhere.

National Legal Service Company,
Suite 436, Ridge Building,
Kansas City, Missouri.

TARIFF

PROTECTION

OUR PROPER PERMANENT POLICY
by James T. McCleary

Formerly Congressman from Minnesota, Assistant Postmaster General in the Roosevelt Administration and ex-Secretary of the American Iron & Steel Institute.

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"Unquestionably the best and most elucidating treatment of the subject ever put in book form."—Leslie M. Shaw, Former Secretary of the Treasury.

Price \$3.50 in U. S. \$4.00 Elsewhere
Postage Prepaid
Address Manufacturers Record, Balto., Md.

INFORMATION WANTED.

What is the latest available authentic information worth to you? General information bureau; congressional and legislative information; general research work; briefs; digests; codifications and abstracts. Interviews. Investigations. General business representative. Materials for essays, debates, theses, sermons, speeches, lectures, arguments, addresses, editorials, and special articles on any subject and for any occasion. Card, analytical, intensive and general index work. Concordances. If you want thorough, conscientious, individual, expert work procure the services of Wm. McAfee Goodwin, District National Bank Bldg., 1406 G St., N. W., Washington, D. C.

INDUSTRIES WANTED

MISCELLANEOUS

YOU WILL TRAIN with a live crowd when you locate your factory in Hattiesburg, Miss. For details write the Chamber of Commerce.

KNOXVILLE, Tennessee, offers an exceptional opportunity for a straw-board and paper mill, bonded warehouse, tobacco and automobile storage room. There is also an excellent opening here for a glass factory and rubber manufacturing company. Knoxville has the dependable native American labor, railway shipping lines, also every resource in the way of raw materials right at the doors of the city. Investigate through our information bureau. Full and reliable information. Industrial promotion our specialty.

CHAS. L. HENCK COMPANY,
Knoxville, Tenn.

REFRIGERATOR FACTORY

Nashville Chamber of Commerce wishes to correspond with responsible parties relative to establishment of refrigerator manufacturing plant. Unique opportunity in virgin field. Very attractive proposition can be made to right parties. Address W. R. Manier, Sr., Secy., Nashville, Tenn.

FINANCIAL

CAPITAL NEEDED for the development of Carolina Beach near Wilmington, N. C. The Vale of Paradise, where dreams come true—where the weak grow strong and the strong grow great, is situated on the mainland fourteen miles from Wilmington and offers every natural advantage of the Florida Beaches, with the added attraction of being reached from New York, Philadelphia or Baltimore in one night's ride. We have miles of smooth unbroken beach, the finest and most beautiful along the South Atlantic Coast, magnificent scenery, wonderful surf for bathing, finest fishing, hunting and boating. Capital is needed for development. We solicit correspondence. Full details upon request. M. H. Moore, Box 432, Wilmington, N. C.

"THE Betrayal of the People in the Federal Reserve Act," T. Cushing Daniel, author. This "International Bankers' Gold-Basis Scheme" has produced and can produce nothing but disaster. Read the remedy in this book and act at once to protect your business, your family and your country. Popular Edition, 25 cents. The Monetary Educational Bureau, 1416 F Street, Washington, D. C.

WANTED—Party to handle sale \$25,000 issue preferred stock in wholesale plumbing supply house in Southern states. Address No. 5903, care Manufacturers Record.

SITUATIONS WANTED

SALES ENGINEER, who has been successfully, construction engineer, mechanical supt., and works manager of large corporation sulphuric acid plants, desires to make connection as sales engineer, having also had broad experience in charge of sales of general machinery and equipment.

Energetic and resourceful. Highest endorsements furnished. Address No. 5908 Manufacturers Record.

PRODUCTION—TIME STUDY—COST EXPERIENCED MAN with excellent record, wishes to make permanent connection with first-class progressive manufacturer or established firm of industrial engineers. Now employed, but wishes to specialize more than present position permits. Chicago or vicinity preferred. Box 5906, Room 1405, 11 S. LaSalle St., N. Chicago, Ill.

PRIME COST WORK—A capable business man of middle age with 20 years experience working up actual costs of manufactured articles and systematizing departmental costs in English factories, desires temporary or permanent engagement, where a man of these qualifications is needed. Jas. Lord, Route 2, Chester, Va.

AGENCIES WANTED

Additional accounts wanted by Manufacturers Agents calling on Wood and Iron Workers in East Tennessee and North Georgia. Address No. 5907, care Manufacturers Record.

ESTABLISHED electrical contracting and supply business wants agency for all kinds of electrical equipment for power and light. E. G. Otto Electric Co., Hill, N. H.

AGENCIES WANTED

MANUFACTURERS Representative in Hayti will be pleased to get in touch with American Manufacturers who would care to introduce their lines in the Republic of Hayti. Address No. 5892, care Manufacturers Record, Balto., Md.

A **NEW ORLEANS** business man wishes connection with manufacturers of machinery who desire representation in that territory, on a commission basis. Address No. 5900, care Manufacturers Record.

MEN WANTED

WANTED—First class Distributors in every state in America to distribute our high grade Ford Shock Absorber, quick seller everywhere shown, don't answer unless you are able to push it. Ezo Shock Absorber Company, Ayden, N. Carolina.

WANTED—Experienced hardware man with executive ability to take active position with old established hardware firm in Southern City of about 20,000 population, and to purchase limited amount of stock in the firm, to be paid for part cash and balance from profits of the business. Wonderful opportunity for right man. Answer with references to: Hugh Richardson, 66½ North Forsyth Street, Atlanta, Ga.

WANTED—REPRESENTATIVES. Splendid opportunity for manufacturers' agents or salesmen, who are in touch with architects and engineers in the building trades, to sell complete and established line of stationary vacuum cleaners. Liberal commission. Good territory now open. Address No. 5795, care Manufacturers Record, Balto.

WANTED MORE MEN.

All or part time lumbermen in Carolinas, Ga., La., Fla., Tenn., N. Y., and Penna. Commission basis with National Organization. An established buying, selling, advertising and information bureau. Good money, advancement. Central Logmen's Bureau, 215 N. 11th St., Columbus, Ohio.

FACTORY PAYMASTERS, bookkeepers, and foremen should write for agency proposition to furnish individual policies of accident and health insurance in America's leading company to plant employees. Double your income. Cash compensation and liberal renewals. Johnson & Adams, 776 Bond Bldg., Washington, D. C.

AGENTS—Splendid proposition to sell lubricating oils and kindred products. List also includes prepared paints, roofing, roof coating, belting, etc. This is no shoddy proposition. Pay weekly. Get our proposition. Doty Co., Station A, Cleveland, Ohio.

IF ACTUALLY QUALIFIED for salary between \$2500 and \$25,000, communicate with undersigned, who will negotiate strictly confidential preliminaries for such position; executive, administrative, technical, professional; all lines. Not an employment agency. Undersigned acts in direct confidential capacity, not jeopardizing present connections. Established in 1910. Send name and address only for explanatory details. R. W. Bixby, Inc., 303 Lockwood Bldg., Buffalo, New York.

MEN WANTED

HIGH CLASS MEN WANTED
Employers in almost every industry are seeking men of real ability for positions of responsibility. Our modern, confidential, effective service finds these openings for you. Send name for details. The Cleveland Vocational Bureau Company, 424 Bulkeley Building, Cleveland, Ohio.

SALESMAN—One who is calling on power plants in any part of Pennsylvania. New Jersey, Delaware, Maryland to sell on commission as side line high grade article that is needed and wanted by every power plant. Address No. 5880 care Manufacturers Record, Baltimore, Md.

MOTOR BOATS

110 FT. MOTOR BOATS.
FORMERLY U. S. SUB-CHASERS, beam 15 ft. 4½ in. draft 6 ft. 3 in., suitable for passenger or commercial service, pilot boats, tenders, patrol duty or make fine yachts, etc. Can go anywhere. Located at Boston, New York, Philadelphia, Annapolis, Norfolk and Charleston, S. C. Full information and prices on request.

HENRY A. HITNER'S SONS CO., 4501 Richmond Street, Philadelphia, Pa.

MACHINERY AND SUPPLIES

LATHES—We offer a limited number of slightly used LeBond Lathes, 19" x 8" bed, at 40% of new value. Not special tools but standard lathes with latest improvements. Hackley Morrison Co., Richmond, Va.

MARINE ENGINE and Boat Exchange—Do you want to buy a boat or marine engine? Do you want to save money on this purchase? We carry in stock boats and engines, both new and rebuilt and sell at bargain prices. Please write us your wants. J. L. Scott, Boat & Engine Exchange, 2365 W. North River Drive, Miami, Fla.

300 TONS PRIME TIN PLATE, \$4.00 per 100 lbs. **300 TONS PRIME GALVANIZED SHEETS, \$3.00** per 100 lbs. **300 TONS BLACKSHEETS, \$2.00** per 100 lbs. **300 tons Steel Bars, \$1.00** per 100 lbs. Wire your orders before the stock is gone. **WERNER, TO PLINY ST., HARTFORD, CONN.**

LARGE LOT Electric Wire and Cable—new stock bought from Govt. Will sacrifice entire lot of about 20,000 lbs. Ask for list. Pratt Thompson, 220 E. Lexington St., Balto., Md.

BOILERS FOR SALE—Nine boilers, 30 H. P. to 130 H. P. high pressure. Oklahoma Boiler & Sheet Metal Works, Picher, Okla.

FOR SALE—One 600 HP Sorge-Cochrane Hot Process Water Softener, capacity 2000 gal. per hour, complete with chemical solution tank, feed apparatus, filter, etc. Address Draycott Mills, Inc., Fulton, N. Y.



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Being thoroughly equipped by years of experience as a business executive in direct management of successful industrial enterprises and familiar with requirements for successful sales development, both in this and foreign countries, I am desirous of arranging with Southern Manufacturers to represent them in the East, in Canada and for Export Sales.

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Water Supply	Suburban Trains
Electric Lights	Paved Roads
	Sewerage

R. R. OTIS, Agent

Arcade Building

ATLANTA

- GEORGIA



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Sales Representative—Storage—Delivery

A New Orleans firm now representing several large manufacturers of nationally known products has ample facilities to care for further lines. Will act as sales representative or merely storage and delivery.

Large warehouse, private switch track, and adequate loading facilities. Desk space with phone and other conveniences may be had if desired. Address

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We have: A fast growing community—

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—a population the year around of 10,000.

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Best drinking water and wonderful climate.

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Wants YOU for a Citizen!

This thriving City of more than 12,000 residents offers every advantage—its location is ideal; its climate, mild and healthful; its people, prosperous, congenial, and an unusually large percentage of them home-owners; and its industries are flourishing. Last, but by no means least, Monroe, is an ideal place in which to live.

Chamber of Commerce

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Domestic Gas 30c. a thousand!

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WATER PIPE AND RELAYING RAIL FOR SALE

10,000 ft. almost new 6" iron water pipe
5,000 ft. 10" Class B cast iron water pipe
100 tons 80 lb. relaying rail
Above items can be bought very reasonable.

M. SCHWARTZ
P. O. Box 181, Charlotte, N. C.

4—225 HORSE POWER HORIZONTAL TUBULAR BOILERS

78" dia. 22' 0" long, complete with fronts, and fittings.

McDERMOTT BROS. CO.
ALLENTOWN, PENNA.

SPECIALLY PRICED

- 2—50 H. P. Fairbanks Morse A. C. Squirrel Cage Induction Motors, 2 phase, 60 cycle, 220 volts, 900 R. P. M.
1—35 H. P. Fairbanks Morse A. C. Squirrel Cage Induction Motor, 3 phase, 60 cycle, 220 volts, 900 R. P. M.
2—50 H. P. General Electric D. C. Type D. L. C. Motors 220 volts, 650 R. P. M.

Machine Tools
Boilers, Engines
Air Compressors, Pumps.

DELTA EQUIPMENT CO.
148 N. Third St. Philadelphia, Pa.

PUNCHES & SHEARS

Williams & White, Dbl. 15" tht. Cap. 1 1/2" x 1"
Bement dbl. 20" tht., cap. 1 1/2" x 1"
84" tht. L&A agl. cap. 1 1/2" x 1 1/2" M.D. (new)
Nowlan Combined Punch & Shear, Cap. 1" x 3/4"
Rotary Shears, 48" tht. Quickwork, cap. 1" plate, M.D.
Rotary Shears, 60" tht. Quickwork, cap. 3/4" plate, M.D.
Rotary Shears, 48" tht. Quickwork, cap. 3/4" plate, M.D.
Rotary Shears, 25" tht. Niagara, cap. 3/4" plate, with circle attachment.

BENDING ROLLS

18" Wickes, Cap. 3/4" plate
16" Wickes, " 1" plate, M.D.
16" H. & J. " 1" plate, belt or motor
12" H. & J. " 5/16" plate
10" Bertsch " 1 1/2" ga.
5" " 3/16" plate

MISCELLANEOUS

36" Cleveland Rotary Planer, solid base
40" Bertram Rotary Planer, on turntable
10 Spindle Internal Vertical semi-auto. nut tappers, 1 1/2"
Lathes, Planers, shapers, etc.

Excellent Condition Priced to Sell

McCoy-Brandt Machinery Co.
210 Penn Ave. Pittsburgh, Pa.

Would YOU buy a SECOND-HAND ELECTRIC MOTOR at ANY price?
If you KNEW it to be as good as new?
Wire us your inquiries.
Second-hand Electric Motors Bought, Sold and Exchanged.
GREGORY & CO. ELECTRIC
CHICAGO, ILL. In business since 1893.
16th and Lincoln Streets Chicago, Ill.

If You Have Any of The Following Machinery to Offer Let Us Hear from You:

- 1—8" Band Saw Mill.
1—Carriage with steam feed and steam set works.
1—60" Edger.
1—5 Saw Trimmer.
1—Mitts & Merrill Hog No. 6.
1—7" Band resaw, vertical—Mershon preferred.
1—6" Band resaw, vertical—Mershon preferred.
1—5" Band resaw, vertical—Mershon preferred.
1—Self Feed Band rip saw.
2—6 x 15" round cylinder six knife Planers.
Filing room equipment.

Dorchester Lumber Company
BADHAM, S. C.

OIL AND GAS ENGINES For Sale

Prompt Deliveries

New and Rebuilt Full Diesel Type Oil Engines

- 2—450 B. H. P. vert., 6 cyl., coupled to 3-ph. 60-cyc. A. C. generators.
1—450 B. H. P. vert., 6 cyl., belted.
2—225 B. H. P. vert., 3 cyl., bld. or cpd.
1—225 B. H. P. vert., 3 cyl., coupled to 200 K. V. A. 3-ph. 60-cyc. 2300-v. generator.
1—170 B. H. P. vert., 3 cyl., belted.
1—120 B. H. P. vert., 3 cyl., coupled to 85 K. W. 3-phase, 60 cyc. 2300-v. generator.
1—120 B. H. P. vert., 3 cyl., coupled or belted.

Semi-Diesel Oil Engines

- 1—60 B. H. P. vert., agl. cyl., 2 cyc., belted.
1—40 B. H. P. vert., agl. cyl., 2 cyc., belted.
2—25 B. H. P. horiz., F.M., type "T" belted.

Gas Engines

- 1—150 B. H. P. vert., 3 cyl., coupled to 100 K. W. 250-v. D. C. generator.
1—100 B. H. P. vert., 3 cyl., coupled to 62 1/2 K. W. 125-250-v. D. C. generator.
Above only partial list—write or wire us full details your requirements.

A. McMILLAN 628 Monadnock Block, Chicago
Specialist in Diesel Oil and Internal Combustion Engineering

DIRECT CONNECTED 60 Cycle Units

KW	Generator	Engine
40	Westinghouse	Ames
70	Westinghouse	Ideal
70	Westinghouse	Ball
70	General Electric	Ball
80	Westinghouse	Hamilton four valve
120	Westinghouse	Rice Sargent Corliss
120	General Electric	Hamilton Corliss
125	General Electric	C. & G. Cooper Corliss
125	General Electric	Harrisburg
125	General Electric	Erie City 4 valve
150	Bullock	Ames
175	General Electric	Skinner Unadon
200	Westinghouse	Lents poppet valve new
240	General Electric	Ames Tandem Comp.
250	Allis-Chalmers	Buckeye
250	General Electric	McIntosh Seymour
300	General Electric	Green Wheelock
300	General Electric	McEwen Tandem Comp.
325	Allis-Chalmers	Buckeye Tandem Comp.
500	Westinghouse	C. & G. Cooper Cross Compound

DIRECT CONNECTED UNITS 220/250 Volts D. C.

KW	Generator	Engine
39	General Electric	Harrisburg
	3 wire	
75	Westinghouse	Harrisburg
	3 wire	
100	Thompson Ryan	McEwen
100	General Electric	Ames
	3 wire	
100	Sprague	Ames
100	Westinghouse	Harrisburg
100	General Electric	American Ball Angle Compound
100	Crocker-Wheeler	Harrisburg
150	General Electric	Harrisburg
150	Western Electric	Erie Ball four valve
160	General Electric	Harrisburg
200	Westinghouse	American Ball Angle Compound
200	Milwaukee	Ames
225	C&C	Hamilton 4 valve
300	Westinghouse	Murray Corliss
	3 wire	
300	Westinghouse	Buckeye Cross Compound
300	General Electric	Ball-Wood Tandem
	3 wire	
350	General Electric	Buckeye Cross Comp.
	Vertical	
500	Burke	Erie Ball

DIRECT CONNECTED UNITS 110/125 Volts D. C.

KW	Generator	Engine
20	Western Electric	Ball-Wood
25	Western Electric	Ball-Wood
50	Western Electric	Ball-Wood
60	Western Electric	Ball-Wood
75	Thompson Ryan	Ridgway four valve
100	General Electric	Harrisburg
110	Westinghouse	Straight line
150	Allis-Chalmers	Erie City four valve
200	Bullock	Allis-Chalmers
250	Crocker-Wheeler	Harrisburg Tandem

We also have a large line of Motors and Generators both A. C. and D. C., and Engines for belted service

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90 West Street, New York, N. Y.

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Have you ever tried this department for advertising used equipment? You may have an Engine, a Boiler or some Relaying Rails that you could turn into cash. For results advertise in the Resale Department of the

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1734 POWERS STREET,

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36 YEARS

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STEAM ENGINES

- 1-38x60 Hamilton Heavy Duty, right hand, Corliss Engine.
- 1-173x48 Hamilton Cross Compound heavy duty Corliss Engine, designed for rope drive.
- 1-24x48 Hamilton Girder Frame Corliss Engine.
- 3-18x36 Allis-Chalmers heavy duty Corliss.
- 1-16x18 Lane & Bodley Slide Valve.
- 1-14x18 Erie City Iron Works Automatic.
- 1-18x16 Erie City Iron Works Automatic.
- 1-13x16 Chandler & Taylor Slide Valve.
- 1-12x12 Brownell Automatic.
- 1-10x14 Houston, Stanwood & Gamble Slide Valve.
- 1-10x12 Chandler & Taylor Slide Valve.

Also many other sizes.

ROTARY CONVERTERS

- 2-1000 kw. Westinghouse, 600 volt D. C., 6 phase, 60 cycle, 900 R. P. M. Rotary Converters, with Transformers for 66,000 primary voltage.

MOTOR GENERATOR SET

- 1-200 kw. Allis-Chalmers, 275 volt, Synchronous Motor Generator Set, 900 R. P. M., with a 225 kva. Allis-Chalmers, 3 phase, 60 cycle, 2300 volt, 900 R. P. M. Motor, complete.

D. C. GENERATORS.

Belted and Direct Connected.

- 1-10 K.W. Wesche, 110 volt, 1000 R.P.M., compound wound, belted type Generator.
- 1-17½ K.W. Triumph, 125 volt, 140 amp., 1250 R.P.M., compound wound, belted Generator.
- 1-20 K.W. Western Electric, 120 volt, 1250 R.P.M., compound wound, belted Generator.
- 1-22½ K.W. Allis-Chalmers, 120 volt, 187.5 amp., 925 R.P.M., compound wound, belted Generator.
- 1-35 K.W. Triumph, 125 volt, compound wound, Generator, direct connected to a 9x12 Skinner Automatic Engine.
- 1-50 K.W. Allis-Chalmers, 250 volt Generator, direct connected to a 12x12 Ball Automatic Engine on sub-base.
- 1-75 K.W. Jantz & Leist, 250 volt, direct current, compound wound, Generator, direct connected to a 15x13 Ideal Automatic Engine on sub-base.
- 1-100 K.W. Triumph, 125 volt, 675 R.P.M., compound wound, belted type Generator.
- 1-100 K.W. Bullock, 120 volt, compound wound, Generator, direct connected to a 16x15 Skinner Automatic Engine on sub-base.
- (Can be rewound for 250 volts.)
- 1-125 K.W. Westinghouse Interpole, 250 volt, compound wound Generator, direct connected to a 16x16 Skinner Automatic Engine on sub-base.

- 2-150 K.W., each, Westinghouse, 275 volt, 200 RPM Generators, each direct connected to an 18x19 Fleming-Harrisburg Automatic Engine, all on sub-base.
- 1-250 kw. Crocker-Wheeler, 250 volts, 200 R. P. M. Generator, direct connected to a 22x22 Harrisburg Automatic Engine.

A. C. GENERATORS.

Belted and Direct Connected.

- 1-5000 kw. General Electric Vertical, 3 phase, 60 cycle, 4500 volts, Turbo Generator Set, with Condenser and accessories.
- 1-3000 kw. Westinghouse, 3 phase, 60 cycle, 4400 volts Turbo Generator Set, Condensing.
- 1-625 kva. Westinghouse-Parsons, 3 phase, 60 cycle, 230 volt Turbo Generator Set, non-condensing.
- 1-500 K.W. Westinghouse, 3 phase, 60 cycle, 2300 volt Generator, direct connected to a 26x42 Hamilton Heavy Duty Corliss Engine 125 R.P.M., complete.
- (Can be reconnected for 3 phase.)
- 1-250 K.V.A. Westinghouse, 2 phase, 60 cycle, 2400 volt Generator, direct connected to a 20x22 Erie Ball Corliss Valve Engine, complete.
- (Can be reconnected for 3 phase.)
- 1-300 kw. General Electric, 3 phase, 60 cycle, 2300 volt Turbo Generator Set, Condensing.
- 2-200 K.W. DeLaval-Bullock, 3 phase, 60 cycle, 220-440 volt Turbo Generator Sets, with Condenser and accessories.
- 1-150 kva. Allis-Chalmers, 3 phase, 60 cycle, 2300 volt, 150 R. P. M., Alternator direct connected to a 14x30 heavy duty double eccentric Allis-Chalmers Corliss Engine.
- 1-125 K.V.A. Ft. Wayne, 3 phase, 60 cycle, 1100-2200 volt Generator, direct connected to a Erie Ball Automatic Engine, with accessories.
- 1-100 kw. General Electric, 3 phase, 60 cycle, 230 volt, 3600 R. P. M., horizontal Turbo Generator Set with Condenser and accessories.
- 1-75 K.V.A. Westinghouse, 2 phase, 60 cycle, 2400 volt Generator, direct connected to a 12x12 Skinner Automatic Engine, with accessories.
- (Can be reconnected for 3 phase.)
- 1-60 K.V.A. General Electric, 3 phase, 60 cycle, 450 volt Generator, direct connected to a 12x12 Skinner Automatic Engine, with accessories.

D. C. MOTORS

- | No. | H. P. | Make. | Volts. | R.P.M. |
|-----|-------|---------------------|--------|--------|
| 1 | 50 | Used Allis-Chalmers | 250 | 800 |
| 3 | 30 | Used Jantz & Leist | 250 | 600 |
| 1 | 30 | Used Triumph | 220 | 965 |
| 1 | 15 | Used Minnpls. | 110 | 850 |
| 1 | 12½ | Used Minnpls. | 220 | 650 |

- | | 7½ Used | Triumph | 220 | 635 |
|---|---------|--------------------|-----|------|
| 2 | 5 | Used Triumph | 220 | 1350 |
| 1 | 5 | Used Jantz & Leist | 220 | 900 |
| 1 | 5 | Used Triumph | 115 | 1000 |
| 1 | 5 | Used Minnpls. | 110 | 725 |
| 2 | 4 | Used Triumph | 110 | 1025 |

Also many other sizes and types.

BOILERS

- 8-1040 H. P. Edgemore, ASME Code, 200 lb. pressure
- 4-823 H. P. Sterling, ASME Code, 200 lb. pressure
- 4-350 H. P. Sterling, 190 lb. pressure
- 3-250 H. P. Franklin Heine type, 150-lb. pressure.
- 1-207 H. P. Geary, Heine type, 170 lb. pressure
- 2-175 H. P. Atlas, 150-lb. pressure.
- 1-200 H. P. 84x18 high pressure H. R. T.
- 4-150 H. P. 72x18 high pressure H. R. T.
- 5-125 H. P. 72x16 high pressure H. R. T.
- 2-100 H. P. 68x16 high pressure H. R. T.
- 1-80 H. P. 60x16 high pressure H. R. T.
- 1-60 H. P. 54x14 high pressure H. R. T.
- 1-50 H. P. Standard Fire Box on skids.
- 1-25 H. P. 42x95 new Vertical, 125-lb. pressure.
- 1-15 H. P. 36x83 new Vertical, 100-lb. pressure.
- 1-10 H. P. 30x83 new Vertical, 100-lb. pressure.

A. C. MOTORS.

- | 3 Phase, 60 Cycle, Squirrel Cage and Slip Ring. | | Make. | | Volts. R.P.M. | |
|---|-------|------------------------|-----|---------------|--|
| No. | H. P. | | | | |
| 12 | 7½ | New General Electric | 220 | 1800 | |
| 8 | 10 | New General Electric | 220 | 1200 | |
| 2 | 15 | New Fairbanks-Morse | 440 | 1750 | |
| 10 | 15 | New General Electric | 220 | 1200 | |
| 1 | 20 | Used Fairbanks-Morse | 220 | 1200 | |
| 8 | 20 | New General Electric | 220 | 1200 | |
| 8 | 25 | New General Electric | 220 | 1200 | |
| 1 | 25 | New G. E. (Slip Ring) | 220 | 1200 | |
| 1 | 30 | New General Electric | 220 | 1200 | |
| 1 | 30 | Used Westinghouse | 220 | 1200 | |
| 1 | 35 | Used G. E. (Slip Ring) | 220 | 1200 | |
| 4 | 40 | New General Electric | 220 | 1200 | |
| 4 | 50 | New General Electric | 220 | 900 | |
| 1 | 50 | Used Western Electric | 440 | 900 | |
| 3 | 50 | New G. E. (Slip Ring) | 440 | 900 | |
| 4 | 75 | New G. E. (Slip Ring) | 220 | 900 | |
| 3 | 100 | New G. E. (Slip Ring) | 220 | 900 | |
| 1 | 100 | Used Westinghouse | 220 | 1200 | |
| 2 | 150 | New G. E. (Slip Ring) | 440 | 720 | |
| 1 | 200 | New G. E. (Slip Ring) | 440 | 600 | |
| 3 | 250 | New G. E. (Slip Ring) | 440 | 600 | |
| 1 | 300 | New G. E. (Slip Ring) | 440 | 600 | |

Also many other sizes and types.
Any of the above 220 volts motors can be furnished for 440 volts and vice versa.

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| Air Tools | Holsts—Electric |
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| Air Compressors | Ladle—(3-ton) |
| Anvils | Lathes |
| Arbor Presses | Locomotive—Steam |
| Bending Slabs | Locomotive—Gasoline |
| Blowers | Magnet—(Lifting) |
| Boilers | Milling Machines |
| Boiler Cars | Motors |
| Bolt Cutters | Moulding Machines |
| Bolt Headers | Nut Tapping Machines |
| Boring Mills | Oxweld Equipment |
| Buffing Machines | Pipe Machines |
| Cars (R. R.) | Pumps |
| Centering Machine | Punches |
| Concrete Mixer | Riddle |
| Core Oven Car | Rivet (Headers) |
| Cornice Brake | Rolls (Bending) |
| Cranes—Gantry | Rolls (Mangle) |
| Cranes—Monorail | Saws |
| Cranes—Overhead | Shapers |
| Derrick | Shears |
| Drills—Column | Slotters |
| Drills—Radial | Solenoid |
| Engines | Tables (Punch) |
| Fans | Tables (Roller) |
| Forges (Rivet) | Tanks (Oil) |
| Flanging Press | Track (Portable) |
| Furnace (Brass Melting) | Transformers |
| Generator Sets | Trolleys |
| Grab Bucket | Turbines |
| Hammers (Steam) | Woodworking Machinery |
| Heater—Feed Water | |

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WATER TUBE BOILERS

Two(2) 338 HP. Heine Water Tube Boilers, pressure allowed last inspection 200 lbs., single drum type, hand fired, complete with Bayer Soot Blowers, full front, full set of castings, and steam trimmings. Immediate shipment. An unusual opportunity to secure a pair of high grade boilers at an exceptionally low figure.

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**RETURN TUBULAR
LOCOMOTIVE****BOILERS****WATER TUBE
SCOTCH MARINE**

A LARGE STOCK OF HIGH-GRADE BOILERS OF PRACTICALLY ALL SIZES, TYPES AND MAKES, TAKEN OVER FROM DU PONT CHEMICAL COMPANY'S AND OTHER PLANTS WITH PRODUCTION RECORDS—RECONDITIONED, OFFERED SUBJECT TO ANY INSPECTION, AVAILABLE NOW!

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HARRIS TRUST BUILDING
CHICAGO, ILL.

RETURN TUBULAR BOILERS

- 1—78" x 20' 125-lbs. working Pressure,
5—72" x 18' 125-to 150-lbs. working Pressure.

LOCOMOTIVE TYPE BOILERS

- 1—150 H.P. Economic,
6—80 H.P. New Water Front open Bottom,

HOISTING ENGINES

- 2—9 1/2" x 12' Lambert D.C.D.D. with A.S.M.E. Boiler,
1—8 1/2" x 10"
3—7" x 10" D.C.D.D. with Boilers,
2—9" x 10" Lambert D.C. 3-Drum Skeleton,
3—9" x 10" Mead-Morrison 3-Drum Skeleton,
1—8 1/4" x 12' Contractors Plant 3-Drum Skeleton,
2—30 H.P. Liddgerwood D.D. Gasoline,
2—8 1/4" x 10" D.C.D.D. Skeleton,
7—7" x 10"

Many smaller sizes.

Pumps, Steam-Triplex-Centrifugal, almost every size and for every duty.

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203 W. Conway St., Baltimore, Md.

FOR SALE

1 1/2 TON KISSEL TRUCK

ALL KINDS OF

Machinery, I Beams, Pipe, Channel Iron, Etc.

We specialize in dismantling Plants, Fires & Wrecks.

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Is not making any money for you.

Turn it into cash.

An advertisement in this department will do it.

Manufacturers' Record

Exponent of America

FOR SALE

- 1—400 H.P. Rust Water-tube Boiler, complete, with stokers.
2—350 H.P. Vogt Water-tube Boilers, complete, with stokers.
3—300 H.P. Heine Water-tube Boilers, hand fired.
1—600 H.P. Springfield Scotch Type Boiler.
1—72"x18' H.R.T., lap side seam, triple riveted.
1—60"x16' H.R.T., butt joint, triple riveted.

CHAS. T. LEHMAN - Birmingham, Ala.

STERLING BOILERS

- 44—825 H.P. Sterling Boilers, Type M-30, 200 pound pressure. Equipped with Westinghouse 8 retort stokers, Vulcan soot cleaners, flow meters, 100,000 cu. ft. capacity forced draft fan direct connected to turbine.

Practically new at a bargain.

THE NASHVILLE INDUSTRIAL CORPORATION
Old Hickory, Tennessee.

New Corliss Engines.

- 27—18x36 Heavy Duty, Allis-Chalmers Corliss Engines, both right hand and left hand. 350 H.P. at 125 r. p. m. 11 ft. by 32 inches. Band wheel. Operated on 140-lb. steam pressure, 1 1/2 inch gauge back pressure, double eccentric.

THE NASHVILLE INDUSTRIAL CORP.

Old Hickory, Tennessee.

NEW BOILERS.

- 2 Horizontal Tubular Boilers, Diameter 78", Length 19' 10". Each 118-3/4" tubes.

USED BOILERS.

- 2 Horizontal Tubular Boilers, Diameter 60", Length 16' 0". Each 44-4" tubes.

Located at Bristol, Va.-Tenn.

Apply: **A. J. MEIER & CO.,**
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FOR SALE CHEAP

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**O. J. MORRIS ICE AND COLD
STORAGE BUILDING CO., Inc.**

416 CARONDELET STREET
NEW ORLEANS, LA.

- 1—30 HP. Boiler, 60" dia., 16' long, with 44-4" Tubes, complete.
2—100 HP. High Pressure Boilers, 66" dia. by 16' with 54-4" Tubes, complete.
1—150 High Pressure Boiler, 72" by 16' High Pressure.
(This boiler has only been used a few months and is in first-class condition.)
These Boilers are being replaced with electric power. Also several hundred second-hand 200 lb. ice cans and 1—15 Ton Frick Machine.

**WATER TUBE
BOILERS**

- | | |
|----------------------|---------|
| 4—382 H.P. Stirling. | 150 lb |
| 4—318 H.P. B. & W. | 150 lb. |
| 2—400 H.P. B. & W. | 150 lb |
| 1—350 H.P. B. & W. | 150 lb |
| 2—400 H.P. Erie City | 150 lb. |

Also

H. B. T. Marine and firebox Boilers of all sizes

The Markman Engineering Company

111 West Monroe Street
Chicago, Ill.

BOILERS FOR SALE

3—300 H.P. Wickes vertical water tube boilers, 150lb pressure allowed by insurance inspection, equipped with Murphy automatic stokers, complete with all necessary fittings. Used four years and in good condition. Also self-supporting steel stack 165' x 84" in good condition. Will sell cheap.

Nathan Pollack

Cynthiana, Ky.

FOR SALE**400 K. W.—D. C.**

Westinghouse Generator, Direct connected to Wetherill heavy duty Rolling Mill type, slow speed, Double Eccentric.

CORLISS ENGINE

Condition equal to new.

Attractively priced.

POWER EQUIPMENT CO., Engrs.

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**BOILER PLANT
FOR SALE**

We own and offer for sale a boiler plant consisting of twelve 1000 HP. Edgemoor Boilers built A. S. M. E. code for 200 lbs.—Foster Superheaters—Taylor Stokers—Diamond Soot Blower—together with feed water heaters, piping, valves, etc.—three steel stacks 250 feet high by 16 feet in diameter—complete coal and ash handling machinery—used three to six months—subject to your inspection—a bargain.

Roy Brenholts, Trustee,

1015 Outlook Building
Columbus, Ohio.

Compare These Motor Prices

These are only a few of the bargains we offer, picked at random from our large stock.

NEW MOTORS

HP.	Make	Phase	Type	RPM.	Cycle	Volts	Price
550	Crock-Whlr.	3	Sl. ring	1170	60	2200	\$1875.00
60	Gener. Elec.	3	KT	1160	60	220	555.00
4-50	Gener. Elec.	3	sl. ring	690	60	440	775.00
8-50	Gener. Elec.	3	sl. ring	1200	60	220	600.00
12-25	Gener. Elec.	3	KT	1200	60	220	302.00
5-20	Gener. Elec.	3	KT	1200	60	220	267.00
4-15	Gener. Elec.	3	KT	1800	60	220	216.00
5-10	Bell	3	compoun.	1800	60	220	216.00
6-7½	Bell	3	compoun.	1800	60	220	190.00
13-5	R & M.	3		1700	60	220	94.00
15-3	Gener. Elec.	3	KT	1800	60	550	75.00
6-10	Gener. Elec.	2	KQ	1200	60	220	216.00
200-¼	Western El.	1	SA	1725	60	110	17.75
55-¼	Western El.	SD		1725	60	110	18.75

USED MOTORS

HP.	Make	Phase	Type	RPM.	Cycle	Volts	Price
400	Whse.	3	synchro.	450	60	2200	\$1000.00
200	Gener. Elec.	3	sl. ring	600	60	2200	1400.00
200	Gener. Elec.	3	wound ro.	580	60	220	975.00
2-100	Gener. Elec.	3	sl. ring	514	60	440	1100.00
75	Gener. Elec.	3	sl. ring	900	60	2200	825.00
2-50	Fks. Mse.	3	sq. ca.	900	60	220	325.00
2-50	Burke	3	sl. ring	1200	60	220	475.00
2-37	Gener. Elec.	3	sl. ring	750	60	220	450.00
2-25	Wagner	3	sl. ring	1150	60	440	375.00
2-30	Ideal	3	sq. ca.	1150	60	440	300.00
200	Whse.	2	sl. ring	580	60	220	1275.00
133	Gener. Elec.	2	synchro.	900	60	2200	900.00
150KVA	Stanley	2	alterna.	900	60	2400	550.00
75	Burke	2	sq. ca.	360	60	220	750.00
90	Diehl		shunt	460		240	575.00
90	Gener. Elec.		compoun.	625		220	775.00
90	Whse.		compoun.	675		220	625.00
75	Diehl		shunt	340		220	575.00
4-47	Whse.		compoun.	600		550	375.00

Some have not been used over 60 days.

All of the above carry our usual ONE YEAR GUARANTEE.

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FOR SALE OR RENT Steam & Electric COMPRESSORS of all sizes.

Hoisting Engines
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Orange Peel and Clam Shell Buckets
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30 KW A.C. Generator

General Electric, type ATB, 3 phase, 60 cycle, 240 volt, 1200 r. p. m. with 1¼ KW Exciter mounted on shaft. This apparatus is like new throughout and priced for quick sale at \$600.00 f. o. b. Philadelphia.

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SPECIAL

- 1-300 H.P. Westinghouse, CX, 3 Phase, 60 cycle, 220/440 V. 600 R.P.M. motor.
- 1-250 H.P. Westinghouse, C, 3 Phase, 60 cycle, 220/440 V. 600 R.P.M. motor.
- 1-250 H.P. Crocker Wheeler, 3 Phase, 60 cycle, 585 R.P.M. motor, 220/440 V.
- 1-300 H.P. Westinghouse, C, 3 Phase, 60 cycle, 600 R.P.M. motor, 220/440 V.
- 1-250 H.P. Westinghouse, C, 2 Phase, 60 cycle, 220/440 V. 580 R.P.M.
- 1-200 H.P. Westinghouse, C, 2 Phase, 60 cycle, 220/440 V. 580 R.P.M.
- 1-100 H.P. Crocker Wheeler, 3 Phase, 60 cycle, 2200 V. 720 R.P.M.

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Three Phase and Single Phase, Sizes ½ to 50 H. P.
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4, 6, 8, 10 & 12"10,000 Ft. 6" Cast Iron Flanged
Pipe4—22x36 Connorsville, Boston
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- 1—23" Stationary head drill, \$ 335.00

Also planers, millers, grinders, punch presses, etc.

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50" dia. x 10' 1" long.	1,000 gallons.
84" dia. x 32' 3¼" long.	10,000 gallons.
84" dia. x 35' 0" long.	10,000 gallons.
78" dia. x 40' 0" long.	10,000 gallons.
112" dia. x 14' 10" long.	7,500 gallons.
112" dia. x 19' 5" long.	10,000 gallons.
120" dia. x 10' 2¼" long.	6,000 gallons.
120" dia. x 13' 6½" long.	8,000 gallons.
120" dia. x 15' 2½" long.	9,000 gallons.
120" dia. x 20' 2½" long.	12,000 gallons.
120" dia. x 25' 2½" long.	15,000 gallons.
120" dia. x 26' 10" long.	16,000 gallons.
120" dia. x 30' 2½" long.	18,000 gallons.
120" dia. x 33' 5½" long.	20,000 gallons.
120" dia. x 35' 2½" long.	21,000 gallons.
120" dia. x 40' 2½" long.	24,000 gallons.
20" dia. x 21' 4" high.	50,000 gallons.
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102" dia. x 24' 6" high, 10,000 gallons.

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Furnished with new threads and couplings or
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We have modern equipment and are prepared to
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TANK & TOWER35,000 GAL. FLATBOTTOM
STEEL TANK WITH
60 FOOT STEEL TOWER
WILL SELL CHEAP.**HERFURTH ENGINE and MACHINERY CO.**
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Pipe, with flanges or couplings.
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S. BENDER IRON & SUPPLY CO.
Shreveport, La.Large quantity Pipe, with
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Government plant a short
time.Rods—100 tons 7/8" Round
Rods, 14' to 22' lengths.**Central Pipe & Supply Co.**Box 1095
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- 1-1900 Ft. Ingersoll, Straight Line Steam Driven.
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- 1-308 Ft. Chicago Pneumatic Tool Co., Oil Engine Driven.

BOILERS

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- 1-100 H.P. Locomotive Fire Box 90 lbs. pressure.
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- 1000 Ton-Steel Plates ¼", 5/16", ¾", 7/16", ½" and ¾" All Sizes.
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- 4-18" I Beams-30' Long.
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We have a large stock of Manila and Wire Rope, Chain, Rope Blocks, Wrenches, Iron and Wood-working Tools, Pipe, Valves, Fittings, Plumbing Supplies, Paints and Varnish, Lumber, Etc.

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20-Rotary Dryers 4'-0" dia., 30'-0" long, with steam coils, housing, manifolds, gears, shafting, radiators, blowers, valves, traps, pillow blocks, bearings, etc. Can be used for drying chemicals, fertilizer, etc. We can supply furnace for coal firing instead of steam coils.

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Cox 8" & Stoeber 3" Pipe Machines.
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**BRAND NEW MOTORS
Take Advantage of these
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1000-¼ H. P. single ph. 60 cy. 110 V. 1750 RPM. complete with cord, plug and pulley \$13.00 each.
½ H. P. Westinghouse single ph. 60 cy. 110/220 V. 1750 RPM. repulsion type \$40.00.
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These motors are known as the PHOENIX motors which we consider the highest grade motor on the market and are equal to such makes as General Electric, Westinghouse or any other motor on the market. It is guaranteed for one year from date of sale. They are packed in their original crates. Great bargains in other sizes. Let us quote you on your requirements.
Terms to all CASH WITH ORDER f. o. b. Chicago, subject to prior sale.
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One new Franklin Process Co.'s Jackspool Dyeing Machine, complete, with Dryer, one ton Trolley and Hoist, also 32-32½" aluminum Jackspools to be used with same. This machine has never been installed. Will sell at a liberal discount. Write for particulars.

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1-27' and 2-30'; practically new

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Boilers, Hoists, Pumps, Engines, Ironworking Machinery, Belting, Shaft-
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FOR SALE**One 80-Ton Shay Locomotive, Stand-
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4-14x22, stand. gauge, American 40-ton, 4-wheel
built 1919, A.S.M.E. boilers, 180 lb. pressure.
Excellent condition;
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Shop No. 51,393, 175 lb. boiler pressure, Excel-
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GREY STEEL PRODUCTS COMPANY,
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One—500-ft. Span Lidgerwood Cableway, D.C., 3-D,
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One—100-ft. 24-inch Robbins Belt Conveyor.
One—Lot of 30-inch Robbins Belt Conveyor Equip-
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Two—Traction Locomotive Cranes, 5-ton, ¾-yd.
clam shell.
Two—Steam driven Byers Traction Cranes, 40-ft.
boom with clam shell.

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BUYERS FOR****ELECTRIC MOTORS
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CARS
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30-40-50-TON CAPACITY
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1—30 T. Browning Loco. Crane, 8 Wh., D.D., 50' Boom.
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Both Cranes complete with outriggers.
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One Browning 20-ton 8-wheel 50-foot boom separate rotating engines
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**The Ideal
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24 x 36 Jaw Crusher

Farrell type 15-B. Rated capacity 60 tons, 3" per hour. Also Farrell 10 by 36", type 22-B, rated 40 tons, 2½" per hour. Both good order. Virginia delivery.

Two Chalmers & Williams No. 6 gyratory. Have been used very little. New Jersey delivery.

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COMMERCIAL TRUST BUILDING
PHILADELPHIA

"HOISTS"

Complete Line Rebuilt Steam and Electric
Compressors, Mixers, Derricks, Cableways, Boilers, Cranes
Write for List
HOISTING ENGINE SALES CO., Inc.
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3—Steam Pavers, Chute Discharge, Overhauled and in First Class Condition.
No. 10 E Foote.....\$1000.00
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FOR SALE

Complete Road Building Machinery

1—10 ton 25 H. P. Austin Road Roller
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1—8x15 Case crusher, Rock Bins, Elevator, revolving screens, complete
3—wheel scrapers, 1 Rooter plow
1—Case grading machine, 1 metal drag
1—1/3 yard tilting concrete mixer
1—1-1/4 Ton Ford truck
1—12 Ton I. H. C. roller with interchangeable wheels
A large lot of camp equipment, wheel-barrows and tools. Sold as a whole.
All above new or in splendid condition.
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1—25-ton, 3-wheel, stand. gauge, Industrial Shop No. 3799, built Dec. 1920, A.S.M.E. boiler, 50 ft. boom, 20 ft. extension, double drums, outriggers, steam and airbrakes. Slightly used, in condition like new. Attractive price.

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3—100 M lbs. cap. 41 ft. steel underframe flat or gondola cars.
5—8,000 gal. steel tank cars.
200—tons NEW 60 lb. rails.
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TRENCHING MACHINES TO RENT

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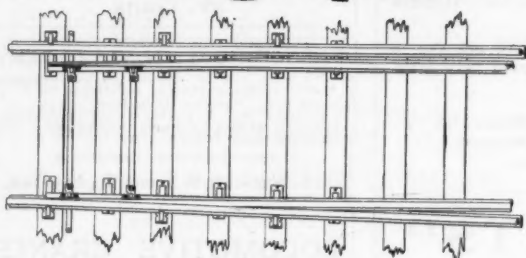
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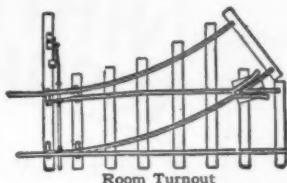
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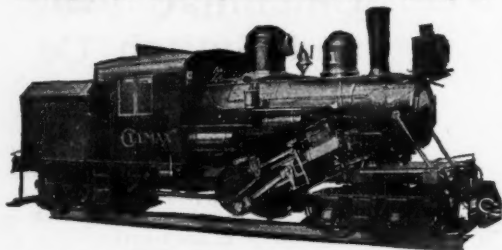


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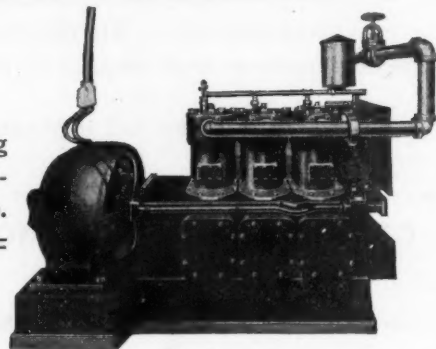
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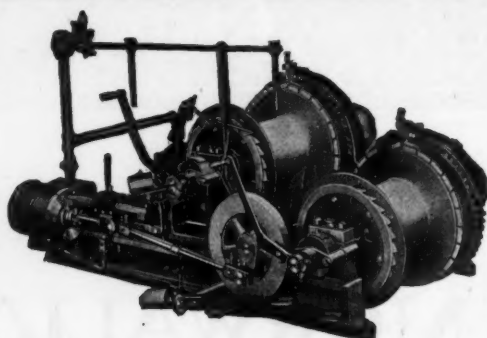
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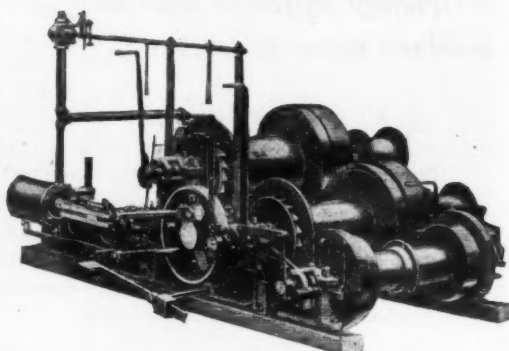
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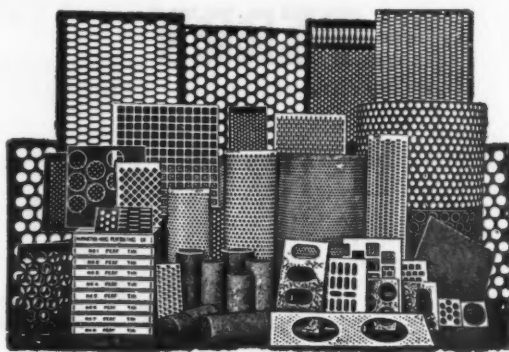
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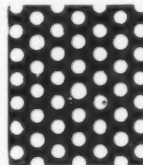


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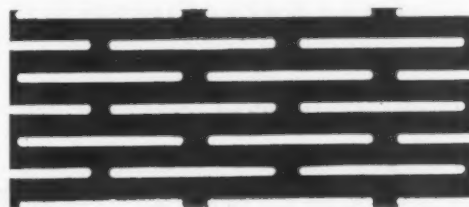
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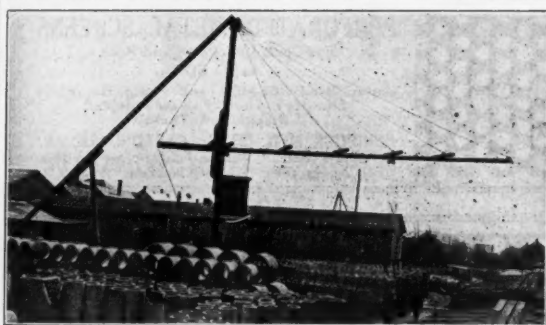
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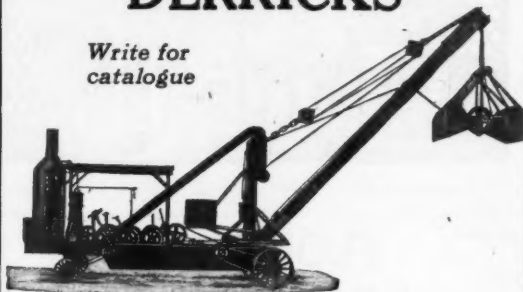
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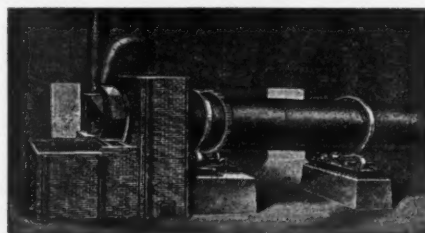
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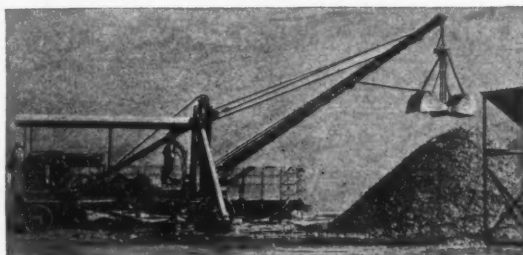
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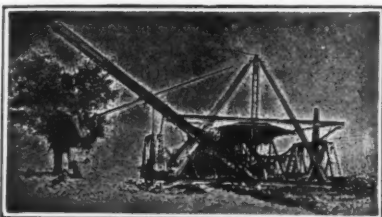
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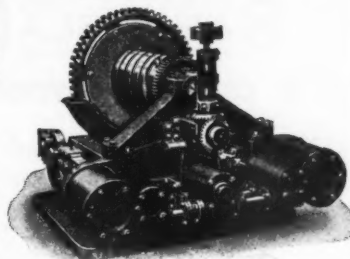
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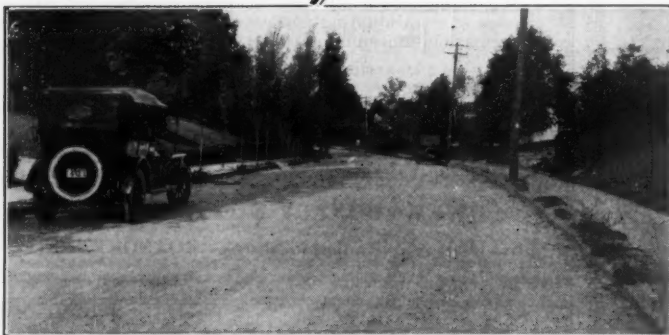
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Above photo shows a stretch of one contract of 3,000 sq. yds just completed on Inman Circle. This particular paving is 34 feet from curb to curb. The contractor used our No. 34 Slag and "Rollo" sand and experienced no trouble, he states, in securing an excellent finish with 1-2-4 mix.

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BASIC SLAG
CRUSHED & SCREENED**

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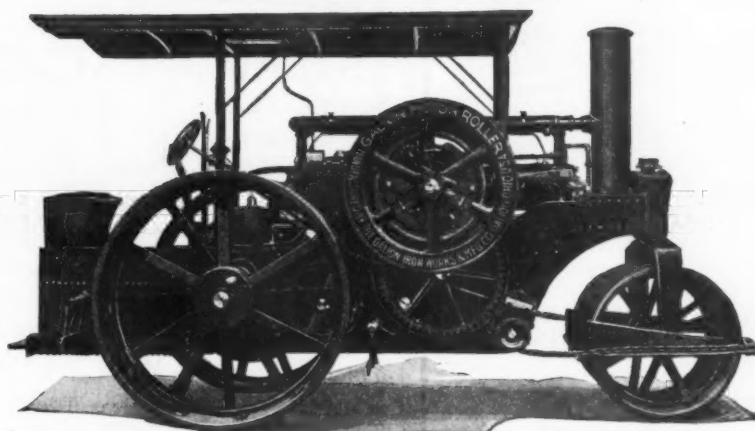
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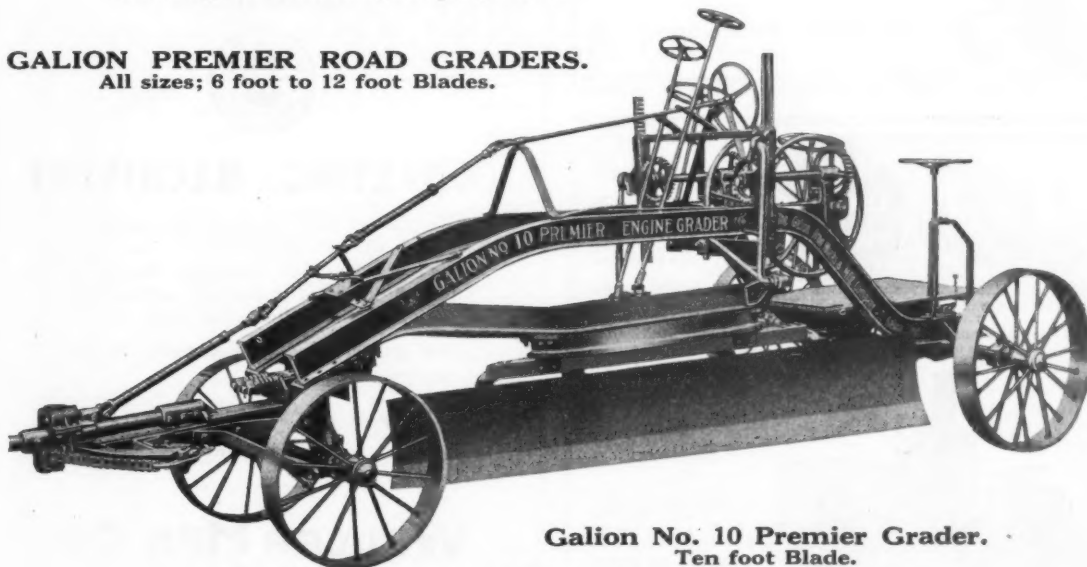
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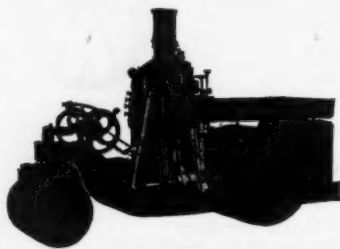
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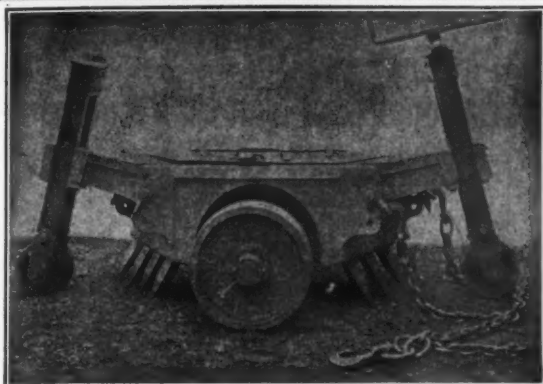
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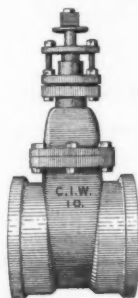
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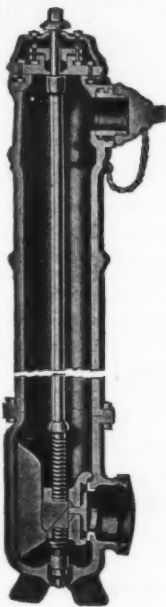
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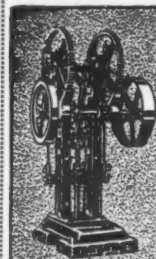
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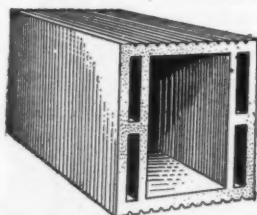
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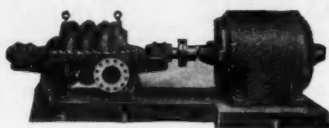
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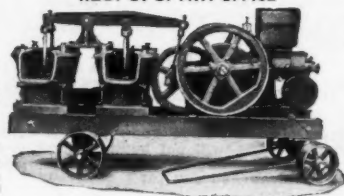
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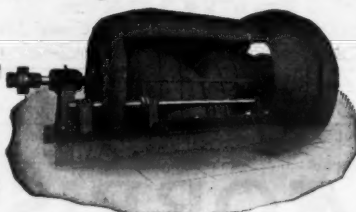
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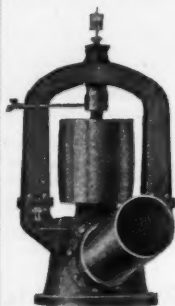
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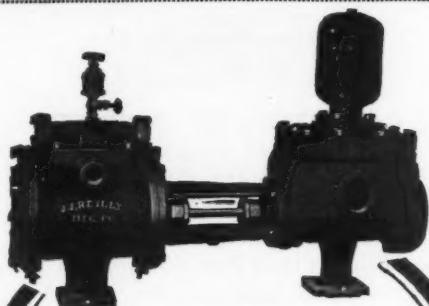
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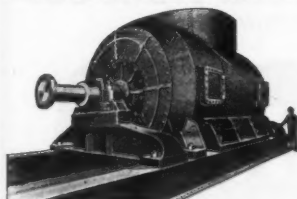
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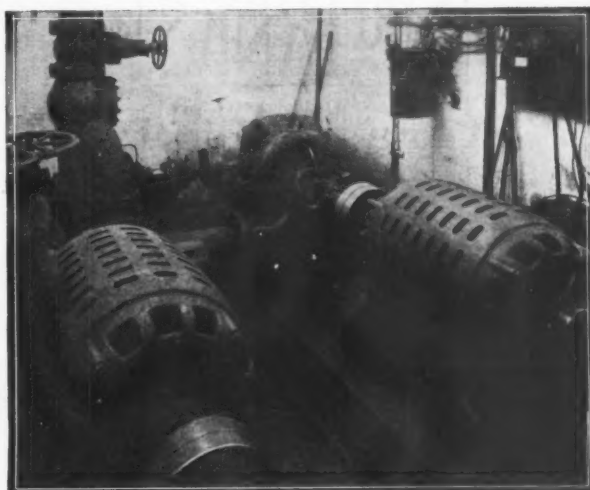
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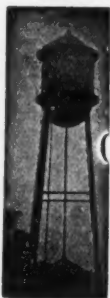
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Oconee Brick & Tile Co., Milledgeville, Ga.

Southern Mosaic Tile Co., Atlanta, Ga.
Hood Brick Co., B. Miffin, Atlanta, Ga.

Segment Blocks.
Chattanooga Sewer Pipe Wks., Chattanooga, Tenn.

Structural.
Kingport Brick Corp., Kingport, Tenn.

Oconee Brick & Tile Co., Milledgeville, Ga.

TILE CEMENT.
American Cement Tile Mfg. Co., Pittsburgh, Pa.

TILE SLABS.
American Cement Tile Mfg. Co., Pittsburgh, Pa.

Ludowici-Celadon Co., Chicago, Ill.

TIMBERS. (Crossed).
Am. Crosscut Wks., Inc., New Orleans, La.

TIME RECORDERS.
Chicago Watchman's Clock Works, Chicago, Ill.

Eco Clock Co., Atlanta, Ga.
Eco Clock Co., Boston, Mass.

Newman Clock Co., New York, N. Y.

TIN AND TERNE PLATES.
American Sheet & Tin Plate Co., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.
Trumbull Steel Co., The Warren, O.

Wheeling Steel Products Co., Wheeling, W. Va.

TIRES.
Motor Truck.
Kelly-Springfield Tire Co., New York, N. Y.

TOBACCO MACHINERY.
Cardwell Machine Co., Richmond, Va.

Ripley Foundry & Mach. Co., Ripley, O.

TOOL CABINETS. (Steel).
Lupton's Sons Co., David, Phila., Pa.

TOOLS.
Machinists.
Manning, Maxwell & Moore, Inc., New York, N. Y.

Newman Mfg. Co., Cincinnati, O.
Western Tool & Mfg. Co., Springfield, O.

Mechanical.
Starrett Co., L. S., Athol, Mass.

Pneumatic.
Ingersoll-Rand Co., New York, N. Y.

TOOL HOLDERS.
Western Tool & Mfg. Co., Springfield, O.

TOOL STANDS. (Steel).
Lupton's Sons Co., David, Phila., Pa.

TORCHES.
Eagle Mfg. Co., Wellsburg, W. Va.

Wall Mfg. Supply Co., P., Allegheny, Pa.

TOWERS.
Concrete.
Lakewood Eng. Co., Cleveland, O.

Electric Transmission.
American Bridge Co., New York, N. Y.

Blaw-Knox Co., Pittsburgh, Pa.
Riter-Conley Co., Pittsburgh, Pa.

Radio.
Riter-Conley Co., Pittsburgh, Pa.

Steel and Wood.
Caldwell Co., Inc., W. E., Louisville, Ky.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Cole Mfg. Co., R. D., Newman, Ga.
Lookout Boiler & Mfg. Co., The Chattanooga, Tenn.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Walsh & Woldner Boiler Co., Chattanooga, Tenn.

TRACK SPIKES.
Atlanta Bolt & Steel Products Co., Atlanta, Ga.

TRACTORS.
Holt Mfg. Co., Inc., The Peoria, Ill.

Industrial.
Lakewood Engr. Co., Cleveland, O.

Manning, Maxwell & Moore, Inc., New York, N. Y.

Industrial.
Lakewood Engr. Co., Cleveland, O.

TRAMWAY.
Overhead.
Richards-Wilcox Mfg. Co., St. Louis, Mo.

Wire Rope.
American Steel & Wire Co., Chicago.

Broderick & Bascom Rope Co., St. Louis.
Caldwell & Son Co., H. W., Chicago.

TRANSFORMERS.
Crocker-Wheeler Co., Ampere, N. J.

General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.

TRANSMISSION BEARINGS AND HANGERS.
Standard Pressed Steel Co., Jenkintown, Pa.

Transmission Ball Bearing Co., Buffalo, N. Y.

Wood's Sons Co., T. B., Chambersburg, Pa.

TRENCH MACHINERY.
Ball Engine Co. (Erie Steam Shovel Co.), Erie, Pa.

Buckeye Traction Ditcher Co., Findlay, O.

TRIM. (Metal)
Dilestrom Metallic Door Co., Jamestown, N. Y.

TROLLEYS. (Overhead Tramway).
Reading Chain & Block Co., Reading, Pa.

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Moore Dry Kiln Co., Jacksonville, Fla.

Platform, Freight, Mill, Factory, Etc.
Edwards Mfg. Co., The Cincinnati, O.

TRUST COMPANIES.
Maryland Trust Co., Baltimore, Md.

TUBE WELL STRAINERS.
Cook, A. D., Lawrenceburg, Ind.

TUBING.
Metal.
Boiler Tube Co., of America, Pittsburgh, Pa.

Grimm, James F., Philadelphia, Pa.
Mueller Metals Co., Port Huron, Mich.

Wheeling Steel Products Co., Wheeling, W. Va.

Seamless Steel.
National Tube Co., Pittsburgh, Pa.

TURBINES.
Hydraulic.
Ludell & Co., James, Springfield, O.

Smith Co., S. Morgan, York, Pa.

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De Laval Steam Turbine Co., Trenton, N. J.

General Electric Co., Schenectady, N. Y.
Westinghouse El. & Mfg. Co., E. Pitta., Pa.

TURNABLES.
American Bridge Co., New York, N. Y.

Virginia Bridge & Iron Co., Roanoke, N. Y.

TWINE.
Whitlock Cordage Co., New York, N. Y.

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Dart Mfg. Co., E. M., Providence, B. I.

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Bethlehem Steel Co., Bethlehem, Pa.

Bourbon Copper & Brass Works Co., Cincinnati, O.

Colonial Supply Co., Pittsburgh, Pa.
Columbian Iron Works, Chattanooga, Tenn.

Crane Co., Chicago, Ill.
Frick Co., Waynesboro, Pa.

Jenkins Bros., New York, N. Y.
Ludlow Valve Mfg. Co., Troy, N. Y.

Lunkenheimer Co., The Cincinnati, O.
Powell Co., The William, Cincinnati, O.

Power Piping Co., Pittsburgh, Pa.
Ryerson & Son, Jos. T., St. Louis and New York.

Vogt Mch. Co., Inc., Henry, Louisville, Ky.

Westinghouse Traction Brake Co., Wilmerding, Pa.

Wood Drill Works, Paterson, N. J.

Acid-proof.
Lunkenheimer Co., The Cincinnati, O.

Gas Producing.
Morgan Construction Co., Worcester, Mass.

Gas Reversing.
Morgan Construction Co., Worcester, Mass.

Gate.
Ludlow Valve Mfg. Co., Troy, N. Y.

VARIABLE-SPEED TRANSMISSION.
Reeves Pulley Co., Columbus, Ind.

VARNISH.
Berry Brothers, Inc., Detroit, Mich.

Wadsworth, Howland & Co., Inc., Boston, Mass.

VEENER CUTTING MACHINES.
Titus, E. E., Petersburg, Va.

VENTILATING APPARATUS. (Engineers' and Contractors').
Allen Engr. & Mfg. Co., Savannah, Ga.

Buckeye Blower Co., Columbus, O.
Buffalo Forge Co., Buffalo, N. Y.

Mechanical.
Advance Company, Richmond, Ind.

VENTILATORS. (Roof).
Canton Art Metal Co., Canton, O.

Edwards Mfg. Co., The Cincinnati, O.
Lenderking, Philip H., Baltimore, Md.

Schoedinger, F. O., Columbus, O.

VICES.
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WAGON LOADERS.
Burger Supply Co., Inc., Rochester, N. Y.

Hais Mfg. Co., Geo., New York, N. Y.
Link-Belt Co., Philadelphia, Pa.

Portable Machinery Co., Passaic, N. J.

WALL PLUGS. (Galvanized).
Van Dorn Iron Works Co., Cleveland, O.

WARDROBES. (Rolling, Disappearing).
Wilson Corporation, The J. G., New York.

WASHERS.
Copper, Iron, Brass, Aluminum.

Stimpson Co., Edwin B., Brooklyn, N. Y.

WASHING MACHINERY.
Ore and Phosphate.

Barley-Labby Co., Charleston, S. C.

Sand and Gravel.
Bonney Supply Co., Inc., Rochester, N. Y.

Link-Belt Co., Philadelphia, Pa.

WATCHMAN'S PORTABLE CLOCKS.
Chicago Watchman's Clock Works, Chicago, Ill.

Eco Clock Co., Atlanta, Ga.
Eco Clock Co., Boston, Mass.

Newman Clock Co., New York, N. Y.

WATERPROOFING. (For Brick, Concrete, Granite, etc.)
Master Builders Co., The Cleveland, O.

Somerset Sema, Inc., L., New York, N. Y.

Texas Co., The, New York, N. Y.
Wadsworth, Howland & Co., Inc., Boston, Mass.

WATER PURIFICATION.
Permutt Co., New York, N. Y.

Rednite Company, Omaha, Neb.
Roberts Filter Mfg. Co., Danville, Pa.

Scattle & Sons Co., Wm. B., Pittsburgh, Pa.

WATER-SOFTENING APPARATUS. (Purifying).
American Water Softener Co., Phila., Pa.

Borromite Company, Chicago, Ill.
International Filter Co., Chicago, Ill.

Permutt Co., New York, N. Y.
Pittsburgh Filter & Engr. Co., Pittsburgh, Pa.

Rednite Company, Omaha, Neb.
Scattle & Sons Co., Wm. B., Pittsburgh, Pa.

WATERWORKS, SUPPLIES, APPLIANCES.
American C. I. Pipe Co., Birmingham, Ala.

Bourbon Copper & Brass Works Co., Cincinnati, O.

Coldwell-Wilcox Co., Newburgh, N. Y.
Columbian Iron Wks., Chattanooga, Tenn.

Cook, A. D., Lawrenceburg, Ind.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.

Hammoller Works, Hamburg, Berks County, Pa.

Michigan Pipe Co., Ray City, Mich.
National Water Supply Co., Birmingham, Ala.

Pacific Pipe & Tank Co., San Francisco, Cal.

U. S. Cast Iron Pipe & Fdry Co., Burlington, N. J.

Wood & Co., R. D., Philadelphia, Pa.

WAX. (For Belts).
Cantol Wax Co., Bloomington, Ind.

WELDING.
Blaw-Knox Co., Pittsburgh, Pa.

Oxy-Acetylene.
Sanborn & Co., W. T., Birmingham, Ala.

WELDING APPARATUS.
Electric Arc.

General Electric Co., Schenectady, N. Y.
Oxy-Acetylene.

Oxweld Acetylene Co., Newark, N. J.
Prest-O-Lite Co., The, New York, N. Y.

Sanborn & Co., W. T., Birmingham, Ala.

WELDING SUPPLIES. (Oxy-Acetylene).
Prest-O-Lite Co., The New York, N. Y.

WELL CONTRACTORS. (Oil, Artesian, etc.).
Cook, A. D., Lawrenceburg, Ind.

Hughes Specialty Well Drilling Co., Charleston, S. C.

Snyder Pump & Well Co., Richmond, Va.
Va. Machinery & Well Co., Richmond, Va.

WELL TOOLS AND SUPPLIES.
Cook, A. D., Lawrenceburg, Ind.

Keystone Driller Co., Beaver Falls, Pa.

WHEELS AND AXLES.
Electric Wheel Co., Quincy, Ill.

WHEEL PRESSES.
Caldwell & Co., E. R., Bradford, Pa.

WINCHES.
Hadfield-Pendell Steel Co., Bucyrus, O.

Mundy Hoisting Engine Co., J. S., Newark, N. J.

WINDLASSES.
Flory Mfg. Co., S. Bangor, Pa.

Hadfield-Pendell Steel Co., Bucyrus, O.
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WINDOW FRAMES AND SASH. (Fire-proofing).
Lupton's Sons Co., David, Phila., Pa.

Tuscon Steel Co., Youngstown, O.

WINDOW GUARDS.
Dow Co., The Louisville, Ky.

Stewart Iron Wks., Co., Inc., Cincinnati, O.

Lupton's Sons Co., David, Phila., Pa.

WIRE.
All Kinds.
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Barbed Wire, Etc.
American Steel & Wire Co., Chicago, Ill.

Youngstown Sheet & Tube Co., Youngstown, O.

Fence.
American Fence Construction Co., N. Y.

Cyclone Fence Co., Wauegan, Ill.

Roebbling's Sons Co., John A., Trenton, N. J.

American Steel & Wire Co., Chicago, Ill.
Gulf States Steel Co., Birmingham, Ala.

Atlantic Electric Co., Norfolk, Va.
Telephone, Telegraph.

American Steel & Wire Co., Chicago, Ill.

WIRE BOUND BOXES.
4-One Box Makers, Hattiesburg, Miss.

WIRE CLOTH. (Iron, Steel, Brass, etc.)
Caldwell & Son Co., H. W., Chicago.

Harrington & King Perforating Co., Chicago, Ill.

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New Jersey Wire Cloth Co., Trenton, N. J.

Wickwire-Spencer Steel Corp., Worcester, Mass.

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Dufur & Co., Baltimore, Md.

Dufur, Baggot & Co., Baltimore, Md.
New Jersey Wire Fence Co., Trenton, N. J.

Stimpson Co., Edwin B., Brooklyn, N. Y.

WIRE NETTING.
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New Jersey Wire Fence Co., Trenton, N. J.

Wickwire-Spencer Steel Corp., Worcester, Mass.

WIRE ROPE CLIPS.
American Steel & Wire Co., Chicago, Ill.

Broderick & Bascom Rope Co., St. Louis.

WIRE STRAIGHTENERS.
Electric Welding Co., Pittsburgh, Pa.

WIRING DEVICES.
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Pacific Tank & Pipe Co., San Francisco, Cal.

Wyckoff & Son Co., A. Elmira, N. Y.

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ROADS AND TIRES

Automobile interests have begun to become alive to the fact that wear and tear on tires is fully as important as the wear and tear on pavements. It is equally true that a rigid pavement surface which fails to give a maximum degree of durability to a pavement will also fail to fully protect auto tires against wear.

"America's Billion Dollar Tire Bill"

The following is very much to the point as well as an authoritative statement:

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Warrenite-Bitulithic

is the acme of road construction in all of the following essential features:

1. Pliable, plastic, malleable, resilient surface directly in contact with motor tires.
For this reason it offers:

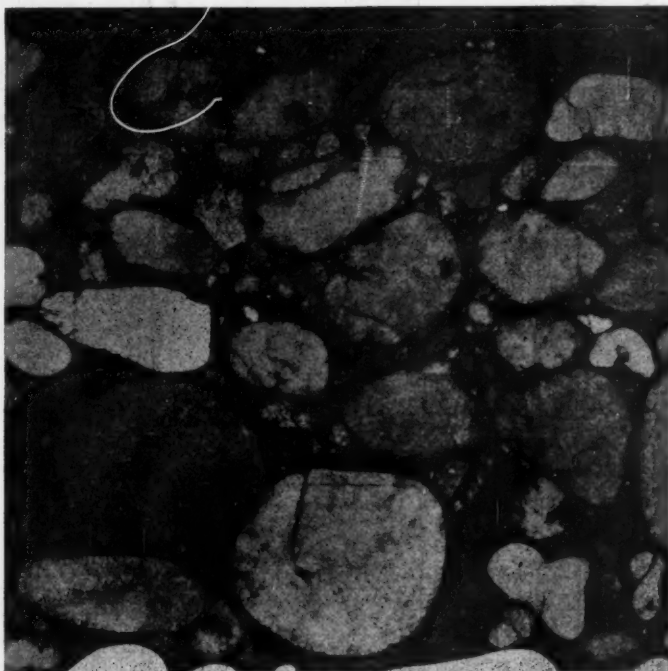
2. The least wear to (a) Auto tires. (b) Road Surface:
3. Stability of wearing surface without rigidity.
4. Resilient, shock absorbing and sufficiently plastic to cause not only the **least wear** on tires and road surfaces but also **least stress** on auto springs and passengers' nerves.

THEREFORE THE MOST COMFORTABLE, DURABLE AND ECONOMICAL

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Warrenite-Bitulithic on Dense Bituminous Concrete Base

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3
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further particulars.

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The recent National transportation tangle would have been a thousand times worse but for the quick and permanent repairs on rolling stock and rails made possible by the oxy-acetylene process.

Linde Oxygen, because of constantly uniform purity and unfailing deliveries,

is used for this highly important work by almost all railroads of standing.

Whenever time is a weighty factor in repair work Linde Oxygen and Linde Service are indispensable.

Seventy-five plants and warehouses centrally situated, place Linde quality and Linde Service at the disposal of every oxygen user.

THE LINDE AIR PRODUCTS COMPANY

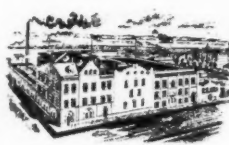

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April 26th., 1921.

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Gentlemen:--

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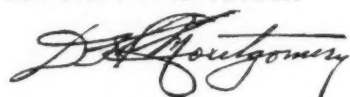
Our Chief Engineer states he could not do without them and that he is sorry he did not install them years ago. We feel safe in saying that the saving is between 10 and 15 per cent.

Any rings which go into our plant from now on will be Zelnicker Ever-Tytes on account of the big saving these rings have shown.


Thanking you for past courtesies, we are,

Yours very truly,

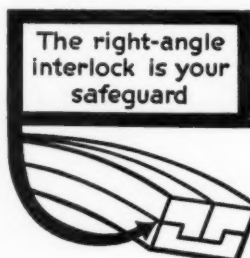
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